

DFCM PRE-BID STAFF REVIEW

Division of Facilities Construction and Management

Architectural

Date

Structural

Date

PROJECT MANUAL:

General Conditions / Notice to Construct & Proposal

Electrical

Date

MECHANICAL

Date

ENERGY:

Date

Sanitary

Date

Architectural

Date

Other Agencies

Date

Mechanical

Date

Landscaping/Architectural

Date

Electrical

Date

Agency/Institution

Date

Permit/Notice

Date

Agency/Institution

Date

Permit/Notice

Date

REVIEW DOES NOT RELIEVE A/E OF DESIGN LIABILITY

DFCM PLAN CHECK

Division of Facilities Construction and Management

Phase

Approved

Revised

No Comments

Issue

Program

Yes

No

Accessibility

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Specification

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Structural

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APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY

APPROVALS:

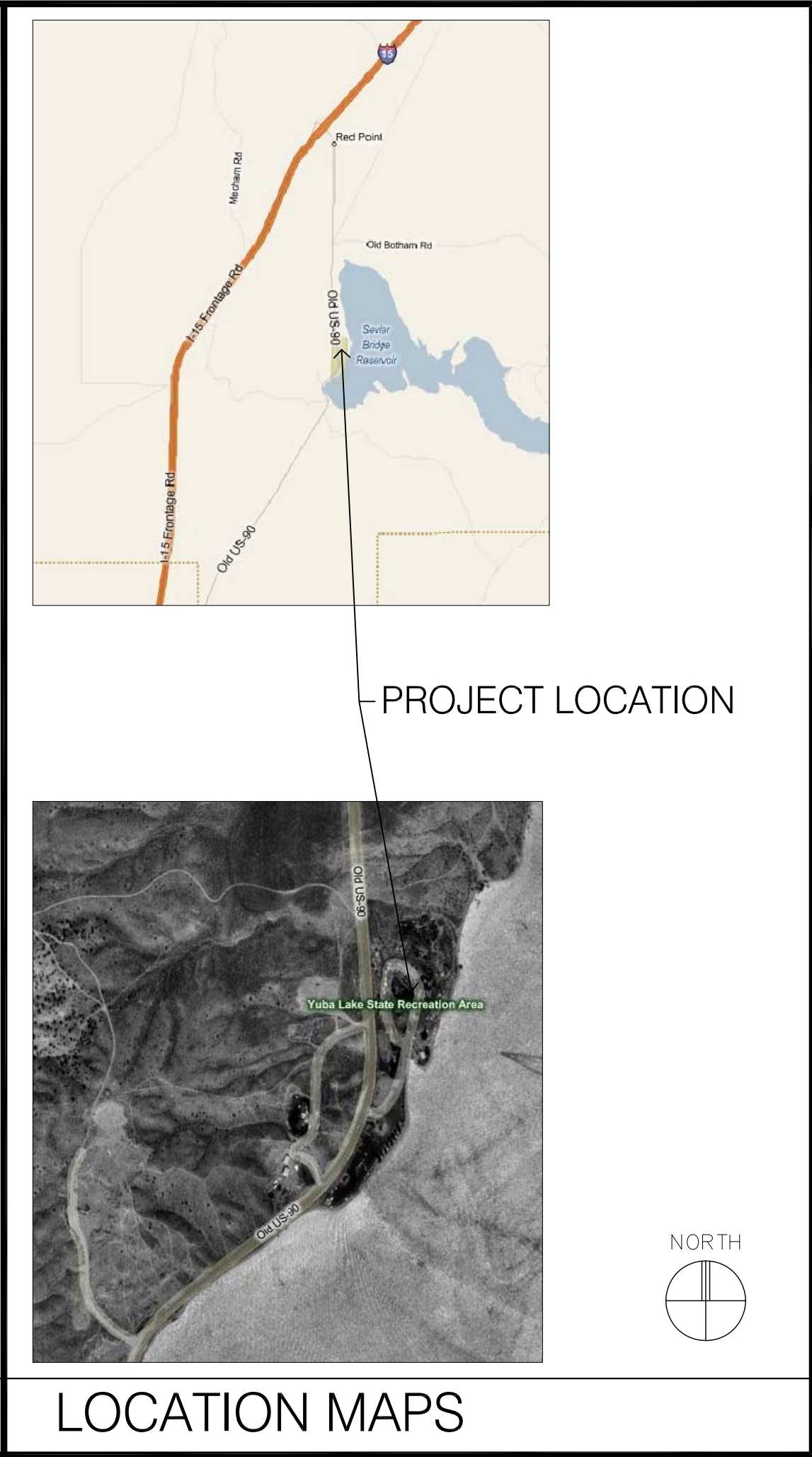
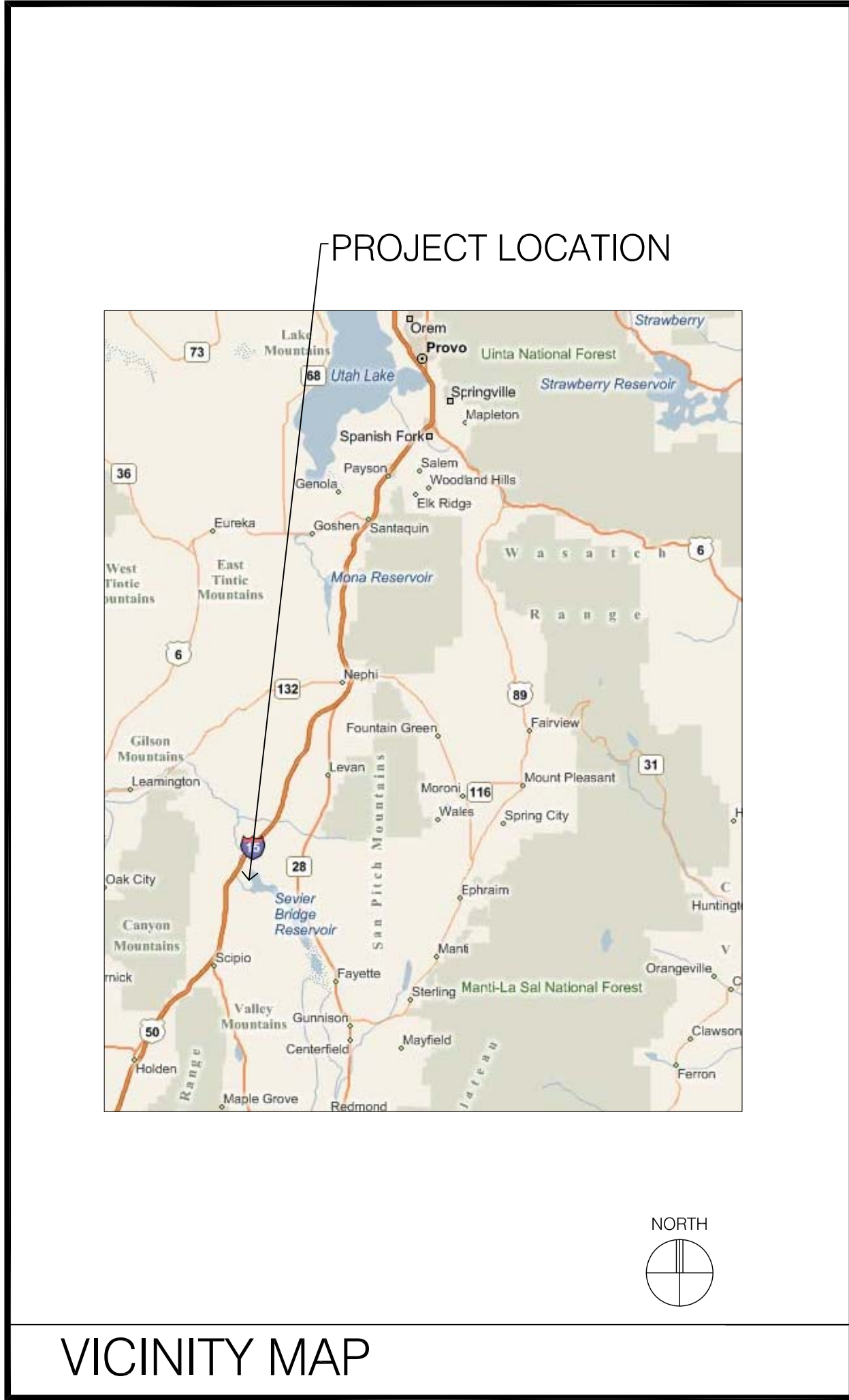
Prime Agency

Date

DFCM

Date

APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY





GENERAL SITE AND BUILDING CONSTRUCTION NOTES:

GENERAL NOTES:

G1 THE CONTRACTOR AND SUB-CONTRACTORS SHALL REVIEW THE PROJECT SITE, SEPTIC TANK AND DRAINAGE FIELD SYSTEM, AND BUILDING DESIGN. THE CONTRACTOR SHALL FURTHER ASSURE THAT ALL CONSTRUCTION TRADES PROVIDING WORK ON THIS PROJECT UNDERSTANDS THE INTENDED SCOPE OF WORK. REFER TO ALL DRAWINGS AND SPECIFICATIONS WHICH ARE INTENDED TO APPLY TO EVERY ELEMENT OF THE WORK REGARDLESS OF CONTRACTOR OR SUB-CONTRACTOR DISCIPLINE.

G2 THE CONTRACTOR SHALL COMMUNICATE AND COORDINATE WITH ALL GOVERNING JURISDICTIONS, UTILITY SERVICE PROVIDERS, ETC., AND COMPLY WITH THE SPECIFIC CONSTRUCTION REQUIREMENTS OF EACH ENTITY FOR THIS PROJECT. THIS INCLUDES THE PAYMENT FOR FEES, PERMITS, IMPACT USE, AND OTHER COSTS REQUIRED TO COMPLETE THIS PROJECT.

G3 THE CONTRACTOR SHALL ARRANGE FOR, COORDINATE AND PAY FOR ALL SITE AND BUILDING LAYOUT, SURVEYING, STAKING, TESTING, SPECIAL TESTING AND INSPECTION SERVICES REQUIRED TO COMPLETE THIS PROJECT.

G4 ALL QUESTIONS RELATING TO THIS PROJECT, INCLUDING BUT NOT LIMITED TO THE CONSTRUCTION DOCUMENTS, SHALL BE DIRECTED TO THE ARCHITECT FOR RESOLUTION BY ADDENDUM.

DEMOLITION NOTES

D1 EXISTING TOILET ROOM BUILDING: BUILDING SHALL BE DEMOLISHED AND REMOVED IN ITS ENTIRETY. THE DEMOLITION SHALL INCLUDE FOOTINGS, FLOOR SLAB AND ALL OTHER BUILDING COMPONENTS. ALL SERVICE UTILITIES SHALL BE CAPPED AND MARKED ON AS-BUILT DRAWINGS UNLESS UTILITY LINES ARE DESIGNATED TO BE USED TO SERVE NEW BUILDING. DEBRIS FROM DEMOLITION SHALL BE REMOVED FROM SITE AND DISPOSED OF IN LEGAL COMPLIANCE BY THE CONTRACTOR. THE BUILDING EXCAVATION SHALL BE FILLED WITH FILL MATERIAL CONFORMING WITH THE SPECIFICATIONS INCLUDING COMPACTION TO 95% DENSITY.

D2 EXISTING PAVEMENT AND WALKWAYS: SHALL BE REMOVED WITHIN THE CONTRACT LIMIT LINE AS REQUIRED TO PERFORM THE NEW CONSTRUCTION. PAVEMENTS AND WALKWAYS SHALL BE RE-CONSTRUCTED AS REQUIRED TO MEET THE NEW CONSTRUCTION SURFACE LEVELS SHOWN ON THE DRAWINGS OR AS REQUIRED TO PROVIDE CONTINUITY.

D3 EXISTING TENT PADS AND OTHER CAMPING IMPROVEMENTS: SHALL BE REMOVED AS REQUIRED TO PERFORM NEW CONSTRUCTION. THESE IMPROVEMENTS SHALL BE RE-CONSTRUCTED TO ORIGINAL CONDITION UPON COMPLETION OF NEW CONSTRUCTION WORK.

D4 EXISTING TREES/SHRUBS AND VEGETATION: DO NOT DISTURB OR DAMAGE ANY EXISTING TREES WITHOUT SPECIFIC APPROVAL AND INSTRUCTIONS BY THE OWNER OR ARCHITECT. USE CARE IN REMOVING ONLY EXISTING SHRUBS AND/OR VEGETATION WHERE NEW CONSTRUCTION IS DESIGNATED OR REQUIRED. THE INTENT IS TO ASSURE THAT EXISTING PLANTS SHALL REMAIN UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE.

D5 EXISTING IRRIGATION SYSTEM: CAREFULLY LOCATE AND MARK EXISTING SPRINKLER SYSTEM LINES, CONTROLS AND SPRINKLER HEADS. REPLACE OR REPAIR EXISTING SYSTEM TO ORIGINAL FUNCTIONING CONDITION UPON COMPLETION OF CONSTRUCTION WORK. EXPAND EXISTING SYSTEM SURROUNDING NEW CONSTRUCTION AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FOR EXISTING VEGETATION.

D6 GRADE AND PROVIDE PLANTABLE SURFACE SOIL IN ALL AREAS DISTURBED BY CONSTRUCTION INCLUDING UTILITY AND SEPTIC SYSTEM TRENCHES. SEED ALL DISTURBED EARTH SURFACES WITHIN CONTRACT LIMIT LINE WITH CRESTED WHEAT GRASS.

D7 SEPTIC TANK AND DRAIN FIELD SYSTEM: IT IS THE INTENT TO LEAVE THE EXISTING SEPTIC TANK, DISTRIBUTION BOXES AND DRAINAGE FIELD SYSTEM INTACT WITHOUT DISTURBING. DISCONNECT THE EXISTING INLET SEWER PIPE FROM THE EXISTING BUILDING NOT LESS THAN 5- FEET FROM THE SEPTIC TANK. CAP THIS INLET AND PROVIDE A CLEAN-OUT TO GRADE. MARK THE CLEANOUT WITH A 6-FOOT STEEL FENCE POST PAINTED ORANGE.

SITE WORK NOTES:

SW1 SOME AREAS OF THE SITE WILL BE USED BY THE PUBLIC AND/OR MANAGING PERSONNEL DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSURE THAT THE AREA OF THE SITE WITHIN THE CONTRACT LIMIT LINES IS SECURE AND PROTECTED DURING CONSTRUCTION. ASSURE THAT BUILDING MATERIAL AND/OR DEBRIS DOES NOT EXIT FROM THE SITE. APPLY DUST AND CONTROL PROCEDURES. BE A GOOD NEIGHBOR.

SW2 NEW FILL MATERIAL SHALL BE PROVIDED TO MEET THE GRADES SHOWN AND SHALL CONFORM WITH THE SPECIFICATIONS. FILL PLACED AS BEARING FOR FOOTINGS, FLOOR SLABS OR OTHER STRUCTURAL ELEMENTS SHALL BE CONSIDERED ENGINEERED COMPACTED FILL AND SHALL CONFORM WITH ALLOWABLE MATERIAL TYPES AND THE 95% COMPACTIONS REQUIREMENT.

A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FROM THE ARCHITECT.

SW3 EXACT LOCATION OF THE NEW BUILDING SHALL BE DETERMINED BY THE ARCHITECT IN THE FIELD BY ESTABLISHING THE LOCATION OF THE NORTH/EAST BUILDING CORNER.

SW4 EXTEND EXISTING UTILITY SERVICE LINES FROM PRIMARY SERVICES TO NEW BUILDING WITH THE EXCEPTION OF THE SANITARY SEWER SYSTEM. ALL UTILITY SERVICE PIPING SIZE AND MATERIAL SHALL BE AS SHOWN ON THE DRAWINGS OR AS SPECIFIED. PROVIDE NEW MAIN SERVICE LINE CONTROL VALVE AND BOX ON WATER SERVICE LINE.

ALL UTILITY LINES SHALL BE MARKED BELOW GRADE WITH APPROPRIATE NON-DETERIORATING, LABELING TAPE RUNNING THE FULL LENGTH OF THE PIPING AND INSTALLED AT A GRADE TO PROVIDE WARNING OF LINE LOCATION DURING FUTURE EXCAVATIONS.

SEE PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

SW5 THE SEPTIC TANK AND DRAINAGE FIELD SYSTEMS SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS. A PERMIT HAS BEEN ACQUIRED FROM THE JUAB COUNTY HEALTH DEPARTMENT PROVIDING APPROVAL TO CONSTRUCT THE SANITARY SEWER SYSTEM. ALL CONSTRUCTION OF THIS SYSTEM SHALL COMPLY WITH COUNTY HEALTH DEPARTMENT REQUIREMENTS. A COPY OF THE PERMIT AND APPROVED DESIGN IS AVAILABLE FROM THE ARCHITECT.

SW6 PROVIDE INTEGRAL CURB AND GUTTER AT EDGES OF ALL ROADWAY AND PARKING AREAS. SLOPE TO CONFORM TO EXISTING ROADWAY DRAINAGE. ALSO PROVIDE CONCRETE WATERWAY WHERE SHOWN

SW7 PROVIDE CONCRETE WALKWAYS WHERE SHOWN ON THE DRAWINGS OR AS REQUIRED.

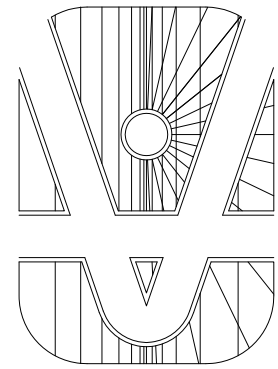
SW8 SURPLUS EARTH MATERIAL SHALL BE REMOVED FROM THE SITE AS PART OF THE WORK IN A LEGAL AND TIMELY MANNER. MATERIAL REMOVAL SHALL NOT OCCUR UNTIL COMPLIANCE WITH SITE GRADING REQUIREMENTS IS ASSURED.



SITE PLAN

SCALE: 1"=20'-0"

L.K. SØRENSEN ASSOCIATES, INC.  
ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS  
1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801)478-0800 Fax (801)262-3511



CONSULTANTS

STRUCTURAL:  
DUNN ASSOCIATES, INC.

MECHANICAL:  
ADVANCED CONCEPTS  
ENGINEERING

ELECTRICAL:  
SPECTRUM ENGINEERS

DEPARTMENT OF NATURAL  
RESOURCES

YUBA RESTROOM  
DESIGN

LEVANS, UTAH



MARK	DATE	DESCRIPTION
	07/05/08	CONSTRUCTION DOCUMENTS

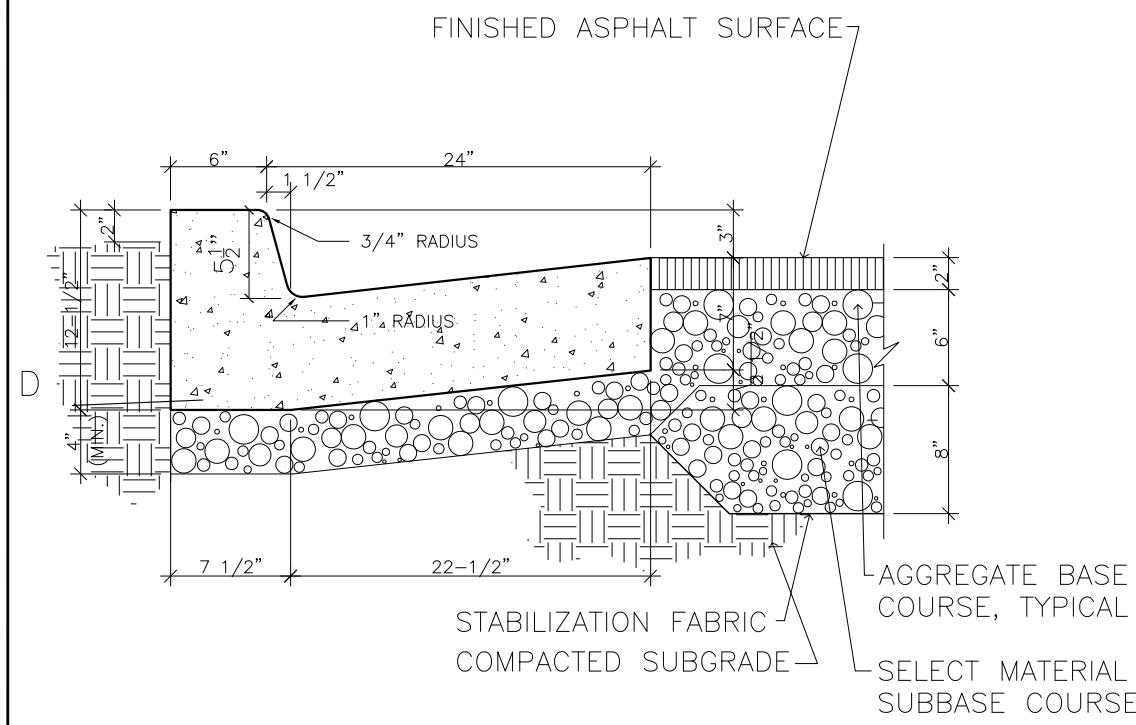
D.F.C.M. PROJECT NO:	07347510
ARCH. PROJECT NO:	0720
CAD DWG FILE:	
DRAWN BY:	ajs
CHECKED BY:	lks
DESIGNED BY:	lks
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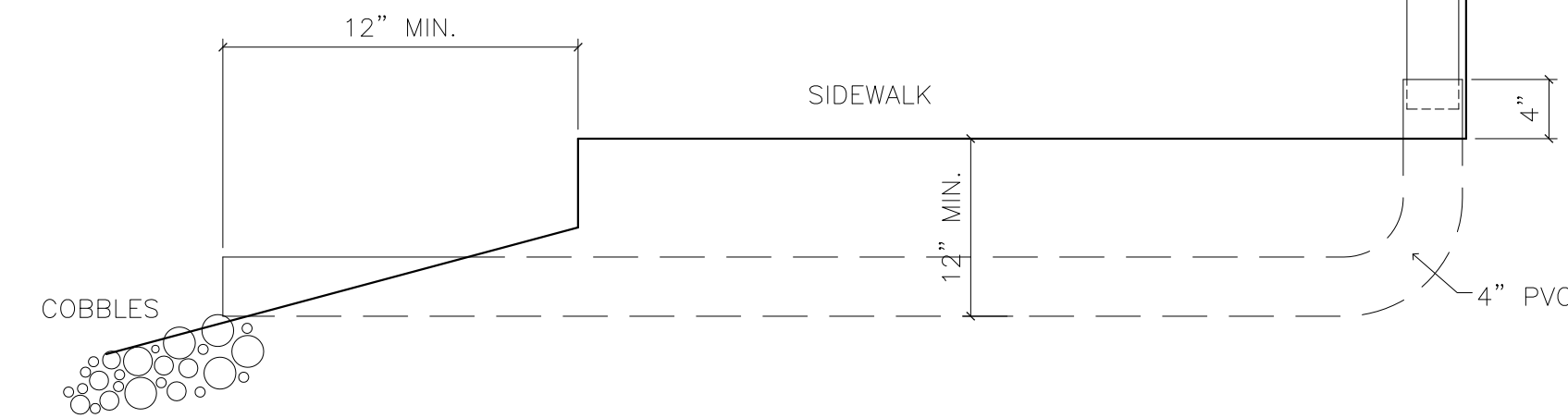
SHEET TITLE

SITE PLAN

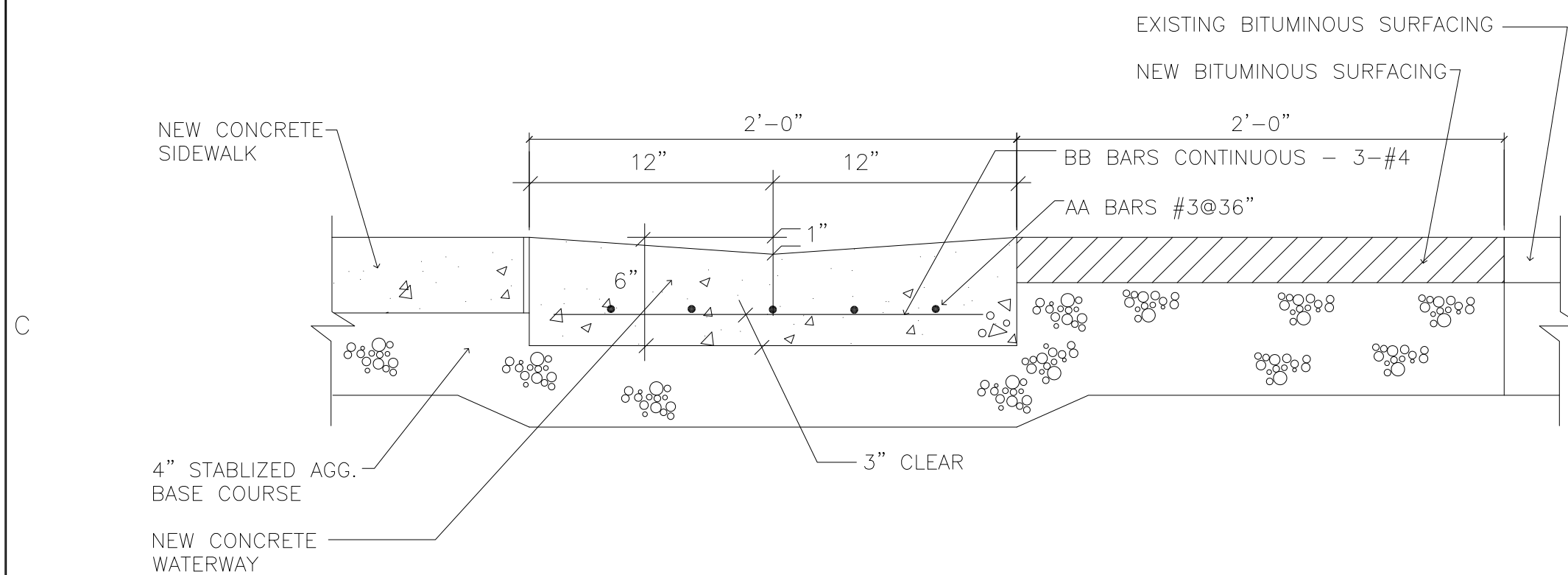
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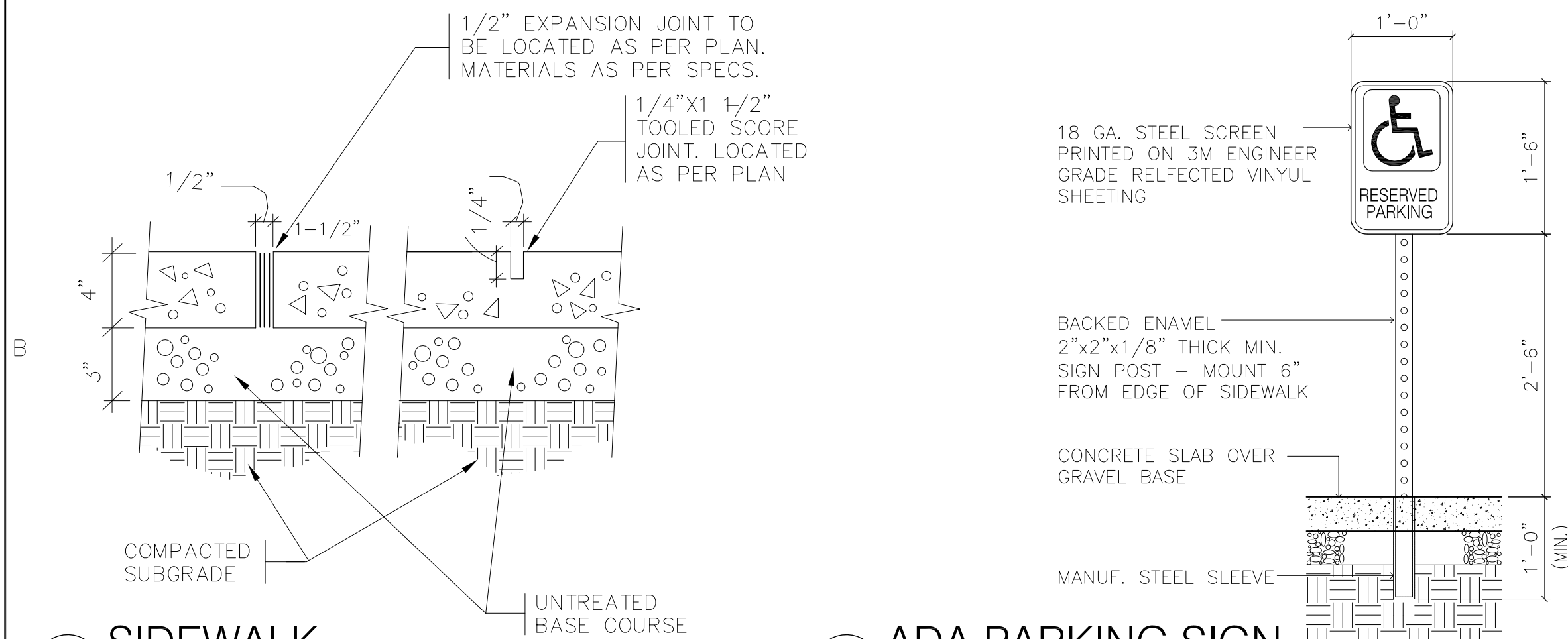
**D1 CURB & GUTTER**  
NO SCALE



**D2 DOWNSPOUT DISHCHARGE**  
NO SCALE

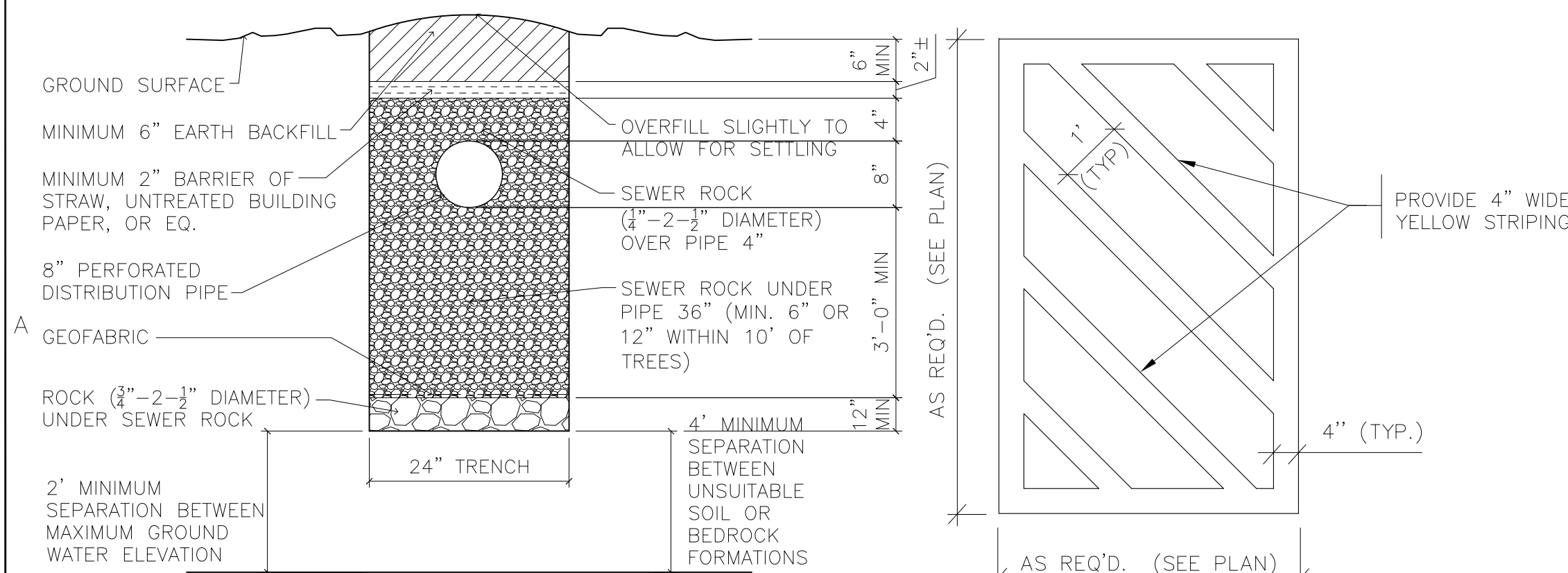


**C1 WATERWAY**  
NO SCALE



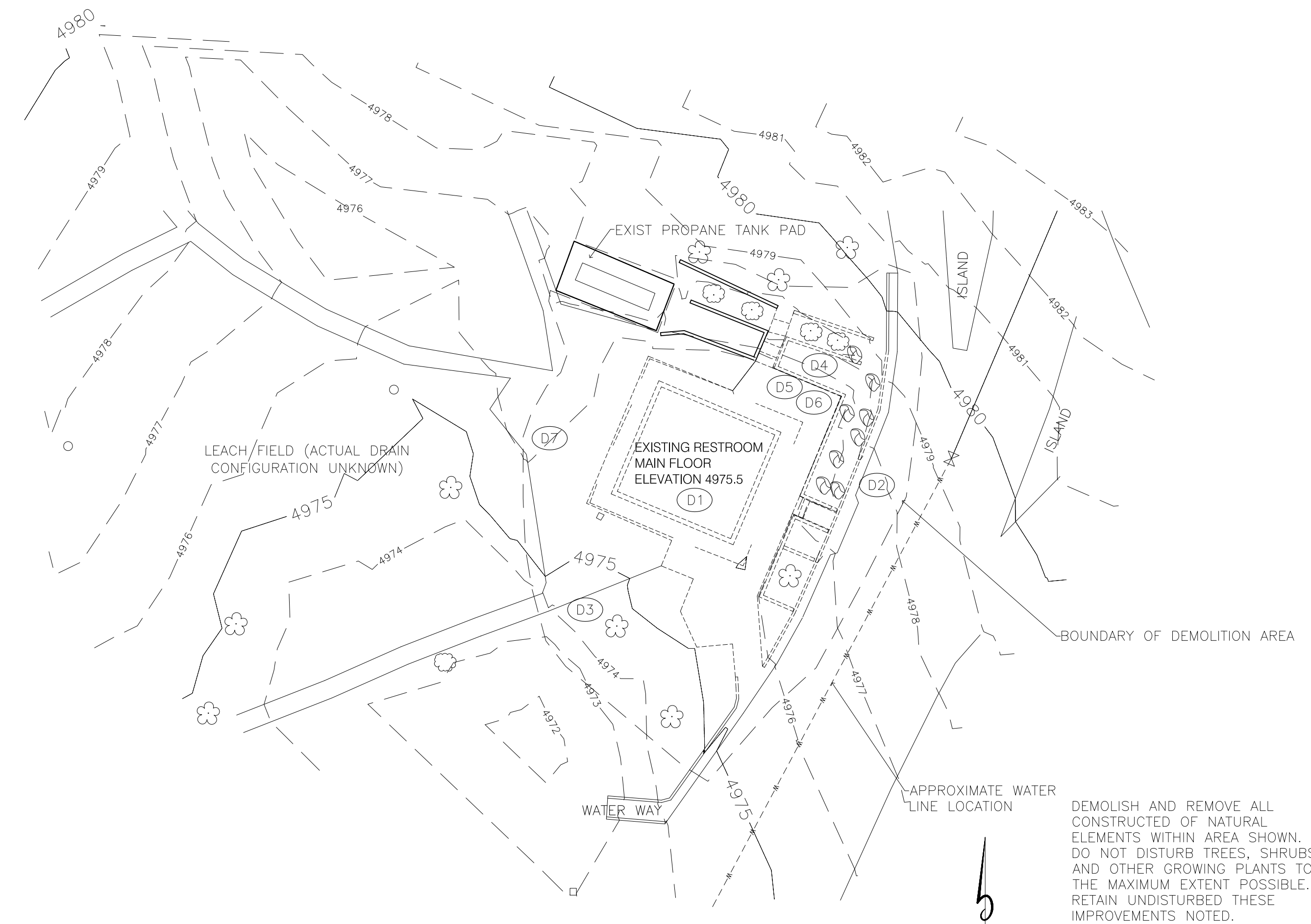
**B1 SIDEWALK**  
NO SCALE

**B2 ADA PARKING SIGN**  
NO SCALE



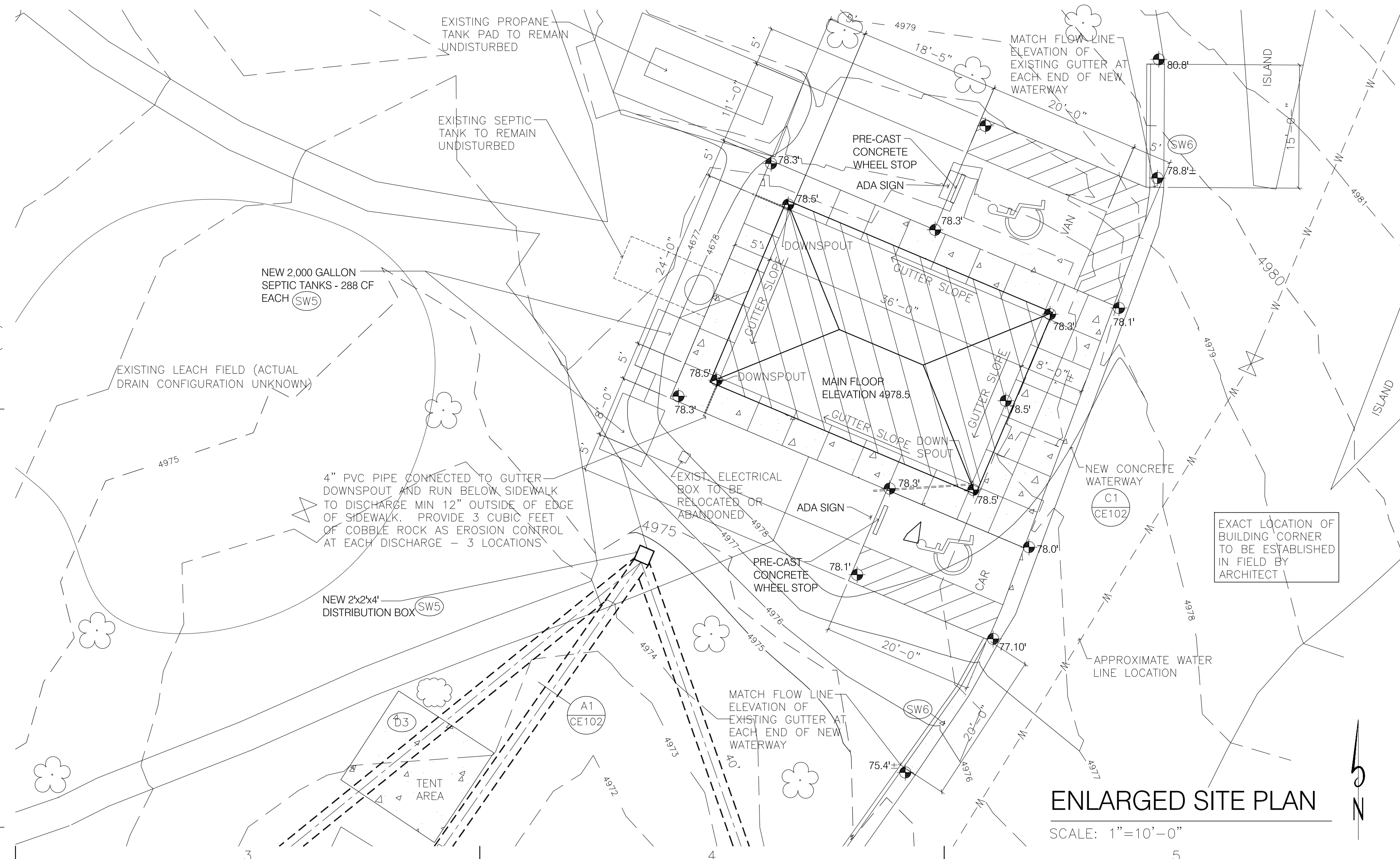
**A1 DISTRIBUTION PIPE DETAIL**  
NO SCALE

**A2 DISABLED / NON-PARK STRIPING**  
NO SCALE



**SITE DEMOLITION PLAN**

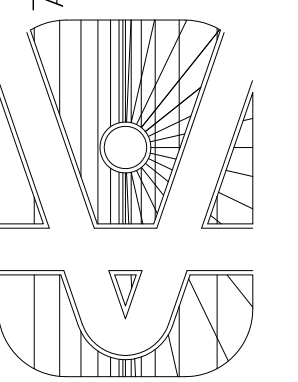
SCALE: 1"=20'-0"



**ENLARGED SITE PLAN**

SCALE: 1"=10'-0"

L. K. SØRENSEN ASSOCIATES, INC.  
ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS



1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801) 478-0800 Fax (801) 262-3511

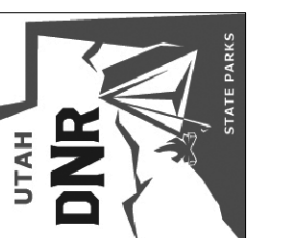
**CONSULTANTS**

STRUCTURAL:  
DUNN ASSOCIATES, INC.  
MECHANICAL:  
ADVANCED CONCEPTS  
ENGINEERING  
ELECTRICAL:  
SPECTRUM ENGINEERS

DEPARTMENT OF NATURAL  
RESOURCES

**YUBA RESTROOM  
DESIGN**

LEVANS, UTAH



05/28/08 CONSTRUCTION DOCUMENTS  
MARK DATE DESCRIPTION

D.F.C.M. PROJECT NO: 07347510  
ARCH. PROJECT NO: 0720  
CAD DWG FILE:  
DRAWN BY: ajs  
CHECKED BY: lks  
DESIGNED BY: lks  
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SHEET TITLE

**ENLARGED &  
DEMOLITION SITE  
PLAN / DETAILS**

**CE102**



GENERAL STRUCTURAL NOTES

GENERAL

1. Specific notes and details in the drawings shall govern over the structural notes and typical details.
2. Typical details and sections shall apply where specific details are not shown.
3. The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any effected elements.
4. Changes to these contract drawings may be made only by an authorized representative of Dunn Associates, Inc. Dunn Associates, Inc. shall not be held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of Dunn Associates, Inc.
5. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner.
6. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions, or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk.
7. The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer.
8. The contractor shall be responsible for means, methods, techniques, sequences, and procedures in order to comply with the contract drawings and specifications. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the roof system is completed.
9. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. Most dimensions and most non-structural elements such as elevations, depressions, slopes, mechanical housekeeping pads, etc. are not shown in the structural drawings. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc.
10. Review of shop drawing submittals by Dunn Associates, Inc. is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from the responsibility of completing the project according to the contract documents.
11. Shop drawings made from reproductions of the structural drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed. The contractor may also obtain electronic files of the plan sheets after signing a release agreement. Electronic files of the detail sheets and schedule sheets will not be made available.
12. All work shall be done in accordance with OSHA requirements. Potential conflicts between these documents and OSHA requirements shall be brought to the attention of the structural engineer before proceeding with the work.

BASIS OF DESIGN

1. Governing Building Code International Building Code 2006
2. Roof Snow Load
- 2.1. Ground Snow Load  $P_g = 43$  psf
- 2.2. Flat Roof Snow Load  $P_f = 30$  psf
- 2.3. Snow Exposure Factor  $C_e = 1.0$
- 2.4. Snow Load Importance Factor  $I_s = 1.0$
- 2.5. Thermal Factor  $C_t = 1.0$
3. Wind Load
- 3.1. Basic Wind Speed (3 Second Gust) 90 mph
- 3.2. Wind Importance Factor 1.00
- 3.3. Wind Exposure C
- 3.4. Internal Pressure Coefficient  $\pm 0.18$
4. Earthquake Design Data
- 4.1. Occupancy Category II
- 4.2. Seismic Importance Factor 1.0
- 4.3. Mapped Spectral Response Accelerations
- 4.3.1. Short Period Acceleration  $S_S = 0.753$
- 4.4. 1-Second Acceleration  $S_1 = 0.241$
- 4.5. Site Class (Soil Profile) D (Assumed for Design)
- 4.6. Spectral Response Coefficients
- 4.6.1. Short Period Acceleration  $S_{DS} = 0.602$
- 4.6.2. 1-Second Acceleration  $S_{D1} = 0.308$
- 4.7. Seismic Design Category D
- 4.8. Effective Seismic Weight of the Structure W
- 4.8.1. Basic Seismic Force Resisting System Special Reinforced Shear Walls
- 4.8.2. Response Modification Coefficient R = 5.0
- 4.8.3. System Over-Strength Factor  $\phi_o = 2.5$
- 4.8.4. Deflection Amplification Factor  $C_o = 3.5$
- 4.8.5. Design Base Shear  $V = C_s * W = 0.0860W$  (Service Level)
- 4.9. Analysis Procedure Equivalent Lateral Force

FOUNDATION

1. Soils Investigation Report: None
2. Soil bearing pressure: 1500 psf - Assumed for design
3. Frost Protection: 30" minimum.
4. Clear excavations of debris and loose soil prior to placing footings. All footings shall bear on undisturbed natural sub-grade or engineered compacted fill as noted in these drawings.
5. The soils engineer shall review all excavations and fill placement prior to placing concrete.

EARTHWORK

1. Clearing: Remove all existing structures and associated foundations, slabs, fencing, asphalt, concrete, and incidental structures as necessary for project completion. The building area shall be stripped of all vegetation, topsoil, and debris. Following stripping, all undocumented fill soils and any remaining loose natural soils shall be excavated to expose competent natural soils.
2. Contractor shall verify soil bearing pressure to be 1500 psf. The contractor is to follow the recommendations of the soils engineer.
3. Proof roll the entire building pad area with normal compaction equipment to check for the presence of unsuitable fills, soft spots, or other undesirable materials or conditions. Remove sub-grade materials that are unsuitable and replace with compacted structural fill or 2,000 psi lean concrete.
4. Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 3" and with not more than 15% passing a #200 sieve. It shall be compacted to at least 95% of the maximum laboratory density as determined by ASTM D 1557 for fill beneath footings and 90% for fill beneath floor slabs. All fill shall be tested. Compacted structural fill shall be placed in lifts not exceeding 8" in uncompacted thickness.
5. Floor slabs thicknesses shall be required by the plans and underlain by a granular layer at least 4" thick. The granular layer shall have a maximum size less than 1" with not more than 5% passing a #200 sieve and shall be compacted to at least 90% of the maximum laboratory density as determined by ASTM D 1557.
6. Consult the project specifications and soils report for further earthwork requirements. The soils engineer shall review all excavations and fill placement prior to placing concrete.

CONCRETE

1. Materials unless noted otherwise:
- 1.1. Normal Weight aggregates ASTM C 33
- 1.2. Fly Ash, Class F Pozzolan ASTM C618
- 1.3. Reinforcing Steel
- 1.3.1. General ASTM 615 Grade 60 (60 ksi)
- 1.4. Anchor Bolts ASTM F1554 Grade 36 (equiv to A36 or A307) with ASTM A563 heavy hex nuts with hardened washers Grade A washers.
- 1.5. Admixtures: Air-entraining admixtures shall comply with ASTM C 260 (when used). Calcium chloride shall not be added to the concrete mix. Unreinforced concrete slabs on grade may have calcium chloride not exceeding one percent.
- 1.6. Type I/II cement complying with ASTM C-150 shall be used for all concrete unless other types are required by the soils report.
- 1.7. The water/cement ratio for concrete 4000 psi and greater shall not exceed 0.50 (grout mixes are excluded).
- 1.8. The slump of all concrete shall be limited to 4" unless plasticizers are used.
- 1.9. Provide air entraining as recommended by ACI 318.
- 1.10. Air entrainment shall be adjusted for the use of admixtures and fly ash.
- 1.11. Fly Ash shall be a maximum of 20% of the cementitious material.
- 1.12. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete.
2. Compressive strengths of concrete at 28 days shall be as follows:
- 2.1. Footings 3000 psi
- 2.2. Interior Slabs on Grade 3500 psi
- 2.3. Masonry Grout 2000 psi
3. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores.
- 3.1. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement.
4. Reinforcement shall have the following concrete cover:
- 4.1. Cast-in-place Concrete Clear Cover
- 4.1.1. Cast against and permanently exposed to earth 3"
- 4.1.2. Formed concrete exposed to earth or weather:
- #6 thru #18 bars 2"
- #5 and smaller bars 1 1/2"

Construction

- 5.1. Use chairs or other support devices recommended by the CRSI to support bar and tie reinforcement bars prior to placing concrete. Reinforcing steel for slabs on grade shall be adequately supported on precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
- 5.2. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to concrete placement.
- 5.3. All embeds and dowels shall be securely tied to formwork or to adjacent reinforcing prior to the placement of concrete.
- 5.4. No pipes, ducts, sleeves, etc. shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around these elements and footings stepped to avoid piping. Reinforcing bars shall not be welded.
- 5.5. Lap lengths shall be as follows:
- #3 = 16"
- #4 = 22"
- #5 = 29"
- 6.1.1. Do not splice stirrups and ties.
- 6.2. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90° standard hook and shall extend to within 4" of the bottom of the footing.

EPOXY

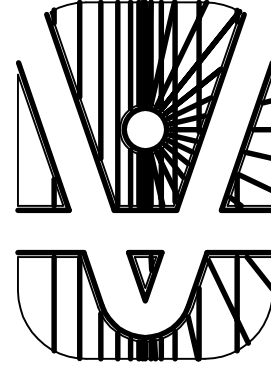
1. Epoxy in concrete shall be "HIT RE 500 SD" by Hilti Corporation, "Epcon Injection System" by Ramset/Redhead, "Power-Fast, Standard Set" by Powers, or approved equal.
2. Epoxy in masonry shall be "HIT HY 20" by Hilti Corporation, or equal.
3. All drilled holes shall be sized per the manufacturers' recommendations.
4. After drilling the proper size hole, clean the walls and bottom of the hole of all dust and debris using a nylon brush in conjunction with oil free compressed air. The hole shall be free of dust, debris and standing water.
5. Follow all manufacturers' recommendations for epoxy installation.

MASONRY

1. Materials, unless noted otherwise:
- 1.1. Concrete Masonry Units (CMU): Lightweight Grade N, Type 1 (minimum unit strength of 1900 psi) f'm = 1500 psi
- 1.2. Mortar: Type "S" (1800 psi minimum compressive strength)
- 1.3. Grout shall attain a minimum compressive strength of 2000 psi at 28 days.
- 1.4. Reinforcing Steel ASTM 615 Grade 60 (F\_y = 60 ksi)
- 1.5. Anchor Bolts ASTM A307 with ASTM A563 heavy hex nuts hardened washers
2. Reinforcement shall have the following cover:
- 2.1. Other reinforcement shall have a minimum coverage of one bar diameter over all the bars, but not less than 3/4". When masonry is exposed to soil, minimum coverage shall be 1 1/2".
3. Construction Requirements
- 3.1. All units shall be laid with full mortar beds on the face shells. All head joints shall be filled solidly with mortar for a distance in from the face of the units not less than the thickness of the longitudinal face shells. Cells which are to be grouted shall have full head joints.
- 3.2. Masonry walls, beams and columns shall be constructed with running bond unless noted otherwise.
- 3.3. Solid grout all walls.
- 3.4. All cells containing reinforcement, embeds, anchor bolts, etc. shall be filled solid with grout. Grout shall be placed by mechanical vibration during placing and vibrated after excess moisture has been absorbed but before workability is lost. Puddling or rodding of grout is not allowed.
- 3.5. Grout pours shall be limited to 4'-0" unless high lift grouting procedures are followed.
- 3.6. Vertical cells to be filled with grout shall have vertical alignment sufficient to maintain a clear, unobstructed, vertical cell measuring not less than 2" by 3". All steel reinforcement shall be secured against displacement prior to grouting by wire positioners or other suitable devices at intervals not exceeding 200 bar diameters or 10'-0" maximum, or at bar splice locations. Vertical reinforcing shall be located at the center of the wall unless noted otherwise.
- 3.7. Reinforcing bars shall not be welded.
- 3.8. Anchor bolts shall be set in a grouted cell. Anchor bolts and shall have 1/2" grout surrounding the shank at its penetration. Grout shall be flush with the face or top of the masonry.
4. Detailing Requirements
- 4.1. Lap all masonry reinforcing per bar size as follows:
- Required lap lengths for single bars centered in each cell:
- #3 = 16"
- #4 = 22"
- #5 = 26"
- 4.2. All vertical reinforcing shall be doweled to the foundation wall, footing (structure below) and to the structure below with the same size dowel, spacing (and in the same core) as the vertical wall reinforcing above.
- 4.3. Corner Bars: Horizontal reinforcement shall be continuous at all corners and at intersecting walls. Provide corner bars with the required lap splice length.
- 4.4. Wall Openings 24" wide and wider: Vertical bars shall extend from floor level below to the roof level above. Horizontal bars for all openings shall extend a minimum of 48 bar diameters beyond the corners of the opening. Where a 48 bar diameter extension is not possible, extend bars as far beyond the opening as possible and terminate the bar(s) with a 90° standard ACI hook.
- 4.5. Horizontal wall reinforcing shall be continuous through joining masonry walls and columns. Horizontal wall reinforcing shall be placed inside the column vertical reinforcing.
- 4.6. Horizontal reinforcing shall terminate with a standard hook at edge of openings and ends of walls without corner bars as shown in details.
- 4.7. All masonry column ties shall terminate with 135° hooks plus a 6 bar diameter extension (4" minimum).

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L.L.K. SORENSEN ASSOCIATES, INC.  
ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS  
1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801)476-0600 Fax (801)262-3511



CONSULTANTS

STRUCTURAL:  
DUNN ASSOCIATES, INC.

MECHANICAL:  
ADVANCED CONCEPTS  
ENGINEERING

ELECTRICAL:  
SPECTRUM ENGINEERS

DEPARTMENT OF NATURAL  
RESOURCES  
YUBA RESTROOM  
DESIGN  
LEVANS, UTAH



MARK	DATE	DESCRIPTION

D.F.C.M. PROJECT NO: 07347510  
PROJECT NO: #27344  
CAD DWG FILE:  
DRAWN BY: Kevin S. Churilla  
CHECKED BY: W.Chris Barker  
DESIGNED BY: Brandt Saxey  
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SHEET TITLE

GENERAL  
STRUCTURAL  
NOTES

S101



DUNN ASSOCIATES, INC.  
Consulting Structural Engineers

EMAIL: ENG@DUNN-SE.COM  
PH: 801-575-8877 FAX: 801-575-8875

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GENERAL STRUCTURAL NOTES

WOOD

1. Materials:
- 1.1. Wood Structural Panel Sheathing
- 1.1.1. Wood structural panels shall conform to the requirements for its type in USDOC PS1 or USDOC PS2. The panels must be identified by the trademarks of the approving testing and inspection agency.
- 1.1.2. Wood sheathing shall be APA rated sheathing Exposure 1 unless noted otherwise.
- 1.1.3. Wood sheathing shall have the following minimum properties, unless noted otherwise:
- |      |              |                   |
|------|--------------|-------------------|
| Roof | 1 1/2" thick | 40/20 span rating |
|------|--------------|-------------------|
- 1.1.4. Nails or other approved fasteners used to connect sheathing to the structure shall be driven such that their head or crown is flush with the surface of the sheathing. Do not overdrive fasteners.
- 1.2. Nails
- 1.2.1. All Nails shall conform with the tolerances specified in ASTM F1667, "Standard Specification of Driven Fasteners: Nails, Spikes and Staples."
- 1.2.2. All nails shall be common nails with the following properties:
- | Nail Size | Shank Diameter | Min. Penetration into Support Member |
|-----------|----------------|--------------------------------------|
| 8d        | 0.131"         | 1.50"                                |
| 10d       | 0.148"         | 1.63"                                |
| 12d       | 0.148"         | 1.63"                                |
| 16d       | 0.162"         | 1.75"                                |
- 1.2.3. Nails with properties less than those listed above shall not be used without prior written approval from Dunn Associates, Inc.
- 1.2.4. Nails with "T", brad, finish or casing heads are not permitted. Nails with Round (full), Offset, Oval, Clipped or Notched heads are acceptable.
- 1.2.5. Deformed shank nails shall have either a helical (screw) or an annular (ring) shank.
- 1.3. Bolts
- 1.3.1. Anchor Bolts: ASTM F1554 Grade 36 (or A307 of A36). All anchor bolts connecting the sill plate to the concrete foundation shall have a PL 1/4"x3"x3" washer between the sill plate and the nut.
- 1.3.2. Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter. Holes shall be accurately aligned in main members and side plates or side members. Bolts shall not be forcibly driven.
- 1.3.3. At all bolted connections, provide a standard cut or larger washer or metal plate between the wood and the bolt head and between the wood and the nut.
2. Connection Hardware
- 2.1. All connection hardware shown shall be supplied by Simpson Strong-Tie Incorporated or USP structural connectors.
- 2.2. Install all hardware per the manufacturer's guidelines.
- 2.3. Connection hardware of equal design properties by other manufacturers may be substituted with written approval from Dunn Associates, Inc.
3. All wood in contact with concrete, masonry or soil shall be pressure treated or redwood.
4. Provide solid shaped blocking at least 2" (nominal) thick and full depth of joist at ends and at each support of joist. Provide approved bridging at an 8'-0" on center maximum between joist end supports. Solid blocking between joists shall be nailed to the wood plate at the top of the wall with one Simpson "A35" framing anchor per each piece of blocking. Fill all holes in the framing anchors with 8d x 1 1/2" nails (12 nails per A35), unless shown otherwise on the drawings.
5. Per IBC 2308.9.10, do not cut or notch any wood stud greater than 25% of its width.
6. Per IBC 2308.9.11, do not bore a hole in any wood stud greater in diameter than 40% of its width. The edge of any bore shall be greater than 3/8" from the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

PREFABRICATED WOOD TRUSSES

1. The prefabricated metal plate wood trusses shall be designed, signed, and sealed by a Professional Engineer registered in the same state as the project location. They shall be designed to support the concentrated and other distributed loads as shown on the framing plans in addition to the following uniform loads:
- 1.1. Dead Load (Top Chord)= 10 psf
- 1.2. Dead Load (Bottom Chord)= 10 psf
- 1.3. Snow Load (Top Chord)= 30 psf
- 1.4. Live Load\* (Bottom Chord)= 10 psf  
50 psf Max Total Load
- \*Does not occur concurrently with top chord live load)
- Designs shall include additional Dead Load of 9 psf at all overbuild framing locations. Correlate the truss design with all mechanical equipment, fire sprinkling systems and hanging walls supported by the trusses. Provide extra trusses where required. Design all wood trusses and bearing attachments for wind uplift, assuming a dead load of 8 psf to resist uplift.
2. The deflection of all prefabricated wood trusses shall be limited to L/240 for total load and L/360 for live load, unless noted otherwise.
3. No stress increase is allowed for snow loads.
4. All truss-to-truss connections shall be designed and provided by the truss manufacturer.
5. Design, handling, erection, and permanent bracing of metal plate connected wood trusses shall be in accordance with ANSI/TPI-1, National Design Standard for Metal Plated Connected Wood Truss Construction.
6. Steel Connector Plates: All steel gusset plates shall be galvanized and shall be approved by the "Research Committee for the International Conference of Building Officials." Submit a copy of the ICBO Report for the connector plate used. Values established by this committee must be indicated on the shop drawings.
- 6.1. The minimum size for any connector shall be 8 square inches.
- 6.2. All steel gusset plates shall be located on the joint as the stresses require and shall provide a minimum bite of 2.5" length on all tension members.
- 6.3. Plates shall be pressed or rolled into member to obtain full penetration without crushing the outer surfaces of wood.
- 6.4. All steel plate dimensions shall be increased by 10% above that required by analysis. Stress increases for steel connector plate values for duration of load are not allowed.
7. No wane, knots, skips, or other defects shall occur in the plated contact area or scarfed area of web members. Plates shall be centered with one required each side of wood truss.
8. The trusses shall be handled and stored in a manner to prevent moisture from being absorbed by the wood.
9. Requirements for truss stability and erection shall comply with the Truss Plate Institute publications entitled "Commentary and Recommendations for Bracing Wood Trusses" and "Commentary and Recommendations for Handling and Erecting Wood Trusses." The contractor shall have copies of these publications on site and shall be familiar with their contents.
10. Shop Drawings: Complete calculations and shop drawings indicating all member forces, stresses, duration factors, lumber grades, dimensions, truss to truss connections, steel truss plate sizes and locations shall be submitted and reviewed by the engineer before fabrication. Each connector shall be dimensioned on the shop drawings as to its exact location at the joint.

QUALITY ASSURANCE PLAN/SPECIAL INSPECTION REQUIREMENTS

1. Seismic/Wind-force-resisting systems:
- 1.1. Masonry shear walls
- 1.2. Wood diaphragms
2. Special inspection and testing as required by the IBC shall be provided by an independent agency employed by the owner unless waived by the building official. The contractor shall coordinate and cooperate with the required inspections/tests as indicated below, referring to the IBC section indicated as appropriate. Special inspection reports from the inspector shall be sent to the engineer and building official, bringing any discrepancies to the contractor's immediate attention. Any uncorrected discrepancies shall be brought to the attention of the engineer and building official prior to completion of that phase of the work. A final report documenting required special inspections and corrections of any discrepancies shall be provided (1704.1.2).
3. Section 1704: Special Inspections
- 3.1. Fabricators (1704.2): All offsite fabrication of structural members (structural steel, precast concrete, wood glulams, etc.) shall be special inspected as required by the IBC, except work performed by fabricators registered and approved to perform work without special inspection. Approved fabricators shall submit a certificate of compliance to building official at the completion of fabrication.
- 3.2. Concrete (1704.4): Concrete construction shall be special inspected according to Table 1704.4, except in buildings 3 stories or less where structural design of continuous concrete footings is based on compressive strength, f'c, no greater than 2500 psi. In the absence of sufficient data or documentation showing conformance to quality standards for materials, testing shall be required to determine material properties under the direction of the building official according to Chapter 3 of ACI 318.
- 3.3. Masonry (1704.5): Engineered masonry in Occupancy Category I, II or III shall be special inspected according to Table 1704.5.1
- 3.4. Wood (1704.6): The following items for roof and floor sheathing in high-load diaphragms (Table 2306.3.2) shall be special inspected according to the approved building plans:
- 3.4.1. Verify wood panel thickness and grade (APA stamp).
- 3.4.2. Verify nominal size of framing members at panel edges, nail/staple diameter and length, the number of fastener lines, and fastener spacing.
- 3.5. Soils (1704.7): Existing site soil conditions, fill placement and procedure and load-bearing requirements shall be special inspected to verify compliance with the approved soils report and Table 1704.7. Where total depth of controlled fill is 12" or less, special inspection is not required during fill placement.
- 3.6. Special Cases (1704.13): Special inspect all post-installed anchors per ICC report.
4. Section 1705: See specific discipline drawings for additional seismic systems requiring special inspection which are not contained in the structural drawings.
5. Section 1707: Special Inspections for Seismic Resistance
- 5.1. Structural wood (1707.3): Continuous special inspection is required during field gluing operations of elements of the seismic-force-resisting system. Periodic special inspection is required for nailing, bolting, anchoring and other fastening of components within the seismic-force-resisting system, including wood diaphragms. Exception: Special inspection is not required for wood shear walls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other components of the seismic-force-resisting system, where the fastener spacing of the sheathing is more than 4" on center.
6. Section 1708: Structural Testing for Seismic Resistance
- 6.1. Engineered masonry in Occupancy Category I, II or III (1708.1.3):
- 6.1.1. Certificates of compliance used in masonry construction shall be verified prior to construction.
- 6.1.2. Compressive strength of masonry, f'm, shall be verified prior to construction per the Unit Strength or Prism Test Methods (2105).
- 6.1. Reinforcing and prestressing steel (1708.3): Certified mill test reports shall be provided for each shipment of reinforcing steel used to resist flexural, shear and axial forces in the following systems:
- 6.1.1. Boundary elements of special reinforced concrete or reinforced masonry shear walls
- 6.1.2. Where ASTM A 615 reinforcing steel is used to resist earthquake-induced flexural and axial forces in special moment frames and in wall boundary elements of shear walls in structures assigned to Seismic Design Category D, E or F, the testing requirements of ACI 318 shall be met. Where ASTM A 615 reinforcing steel is to be welded, chemical tests shall be performed to determine weldability in accordance with Section 3.5.2 of ACI 318.
7. Structural Observations for Seismic Resistance: Contractor shall notify the engineer at least 2 days prior to the following stages of construction so the engineer may have the opportunity to review the work. Observation reports shall be sent to architect, contractor and building official.
- 7.1. Initial placing of any concrete,
- 7.2. Initial grout pours for masonry walls
- 7.3. Completion of structural roof deck
- 7.4. Initial wood framing
- 7.5. Initial finish work

LEGEND OF MARKS AND ABBREVIATIONS

AB	Anchor Bolt	LB	Pounds (#)
ALT	Alternate		
ARCH	Architect	MAS	Masonry
		MAX	Maximum
BLDG	Building	MECH	Mechanical
BLK	Blocking	MFR	Manufacturer
BM	Beam	MIN	Minimum
BN	Boundary Nail	MISC	Miscellaneous
BOTT	Bottom	MTL	Metal
BRG	Bearing		
BTWN	Between	NS	Near Side
		NTS	Not To Scale
CL	Center Line		
CMU	Concrete Masonry Unit	oc	On Center
COL	Column	OPNG	Opening
CONC	Concrete	OPP	Opposite
CONT	Continuous	OSB	Orientated Strand Board
COORD	Coordinate		
CTR	Center	PCF	Pounds per Cubic Foot
		PEN	Penetrate or Penetration
DB	Deck Bearing	PERP	Perpendicular
DBA	Deformed Bar Anchor	PFT	Pre-Fabricated Truss
DBL	Double	PL	Plate
DET	Detail	PLF	Pounds per Lineal Foot
DIA	Diameter	PREFAB	Prefabricated
DIM	Dimension	PSF	Pounds per Square Foot
DWG	Drawing	PSI	Pounds per Square Inch
(E)	Existing	REINF	Reinforce
EA	Each	REQD	Required
EF	Each Face	RTU	Roof Top Unit
EL	Elevation		
ELEC	Electrical	SCHED	Schedule
ENGR	Engineer	SIM	Similar
EQ	Equal	SOG	Slab on Grade
EQUIP	Equipment	STD	Standard
EQ SP	Equally Spaced	STIFF	Stiffener
EW	Each Way	STL	Steel
EXT	Exterior	STRUCT	Structural
		SW	Shear Wall
FLR	Floor	T&B	Top and Bottom
FND	Foundation	TEMP	Temperature
FS	For Side	THRU	Through
FTG	Footing	TOC	Top of Concrete
		TOF	Top of Footing
ga	Gage	TOS	Top of Steel
GALV	Galvanized	TOW	Top of Wall
GLB	Glued Laminated Beam	TYP	Typical
GSN	General Structural Notes		
GT	Girder Truss		
		UNO	Unless Noted Otherwise
HD	Hold-down		
HORIZ	Horizontal	VERT	Vertical
HSA	Headed Stud Anchor		
HSS	Hollow Structural Section	W/	With
		WP	Working Point
ICBO	International Conference Of Building Officials		
IBC	International Building Code		
INT	Interior		
JST	Joist		
K	Kip(S) = 1000 Pounds		
KLF	Kips Per Lineal Foot		
KSF	Kips Per Square Foot		

DEFERRED SUBMITTALS

1. Items requiring deferred submittals that are listed below are to be designed and fabricated by the manufacturer according to specifications given in structural and architectural drawings.
- 1.1. Prefabricated Roof Trusses (by roof truss manufacturer)
- 1.2. Concrete Mix Designs (by concrete supplier)
2. These deferred submittals shall first be submitted to the project architect and/or engineer for review and coordination. Upon completion of the architect/engineer review, a submittal to the city shall be made (for city review and approval). The city submittal shall include a letter stating that the architect/engineer review has been performed and that the plans and calculations for the deferred submittal items are found to be acceptable (e.g., with regard to geometry, load conditions, etc.) with no exceptions.
3. The final submittal shall be signed and sealed by a Professional Engineer licensed in the state in which construction will occur and shall be available at the jobsite throughout construction.

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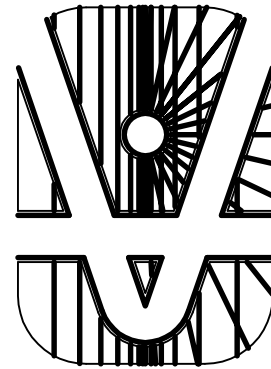


DUNN ASSOCIATES, INC.  
Consulting Structural Engineers

EMAIL: ENG@DUNN-SE.COM  
PH: 801-575-8877 FAX: 801-575-8875

L.K. SORENSEN ASSOCIATES, INC.  
ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS

1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801)476-0600 Fax (801)262-3511



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STRUCTURAL:  
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YUBA RESTROOM  
DESIGN

LEVANS, UTAH



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PROJECT NO: #27344  
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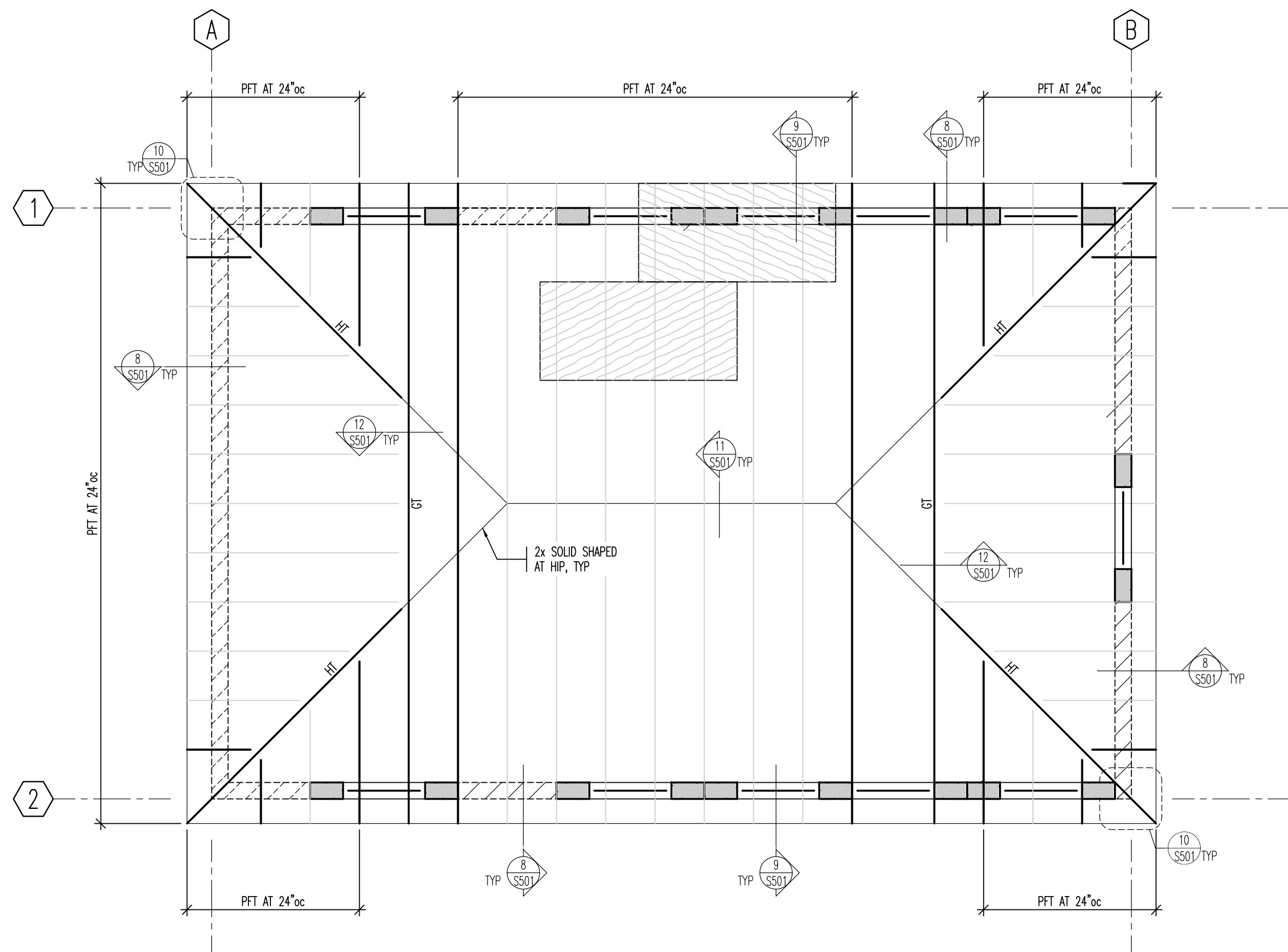
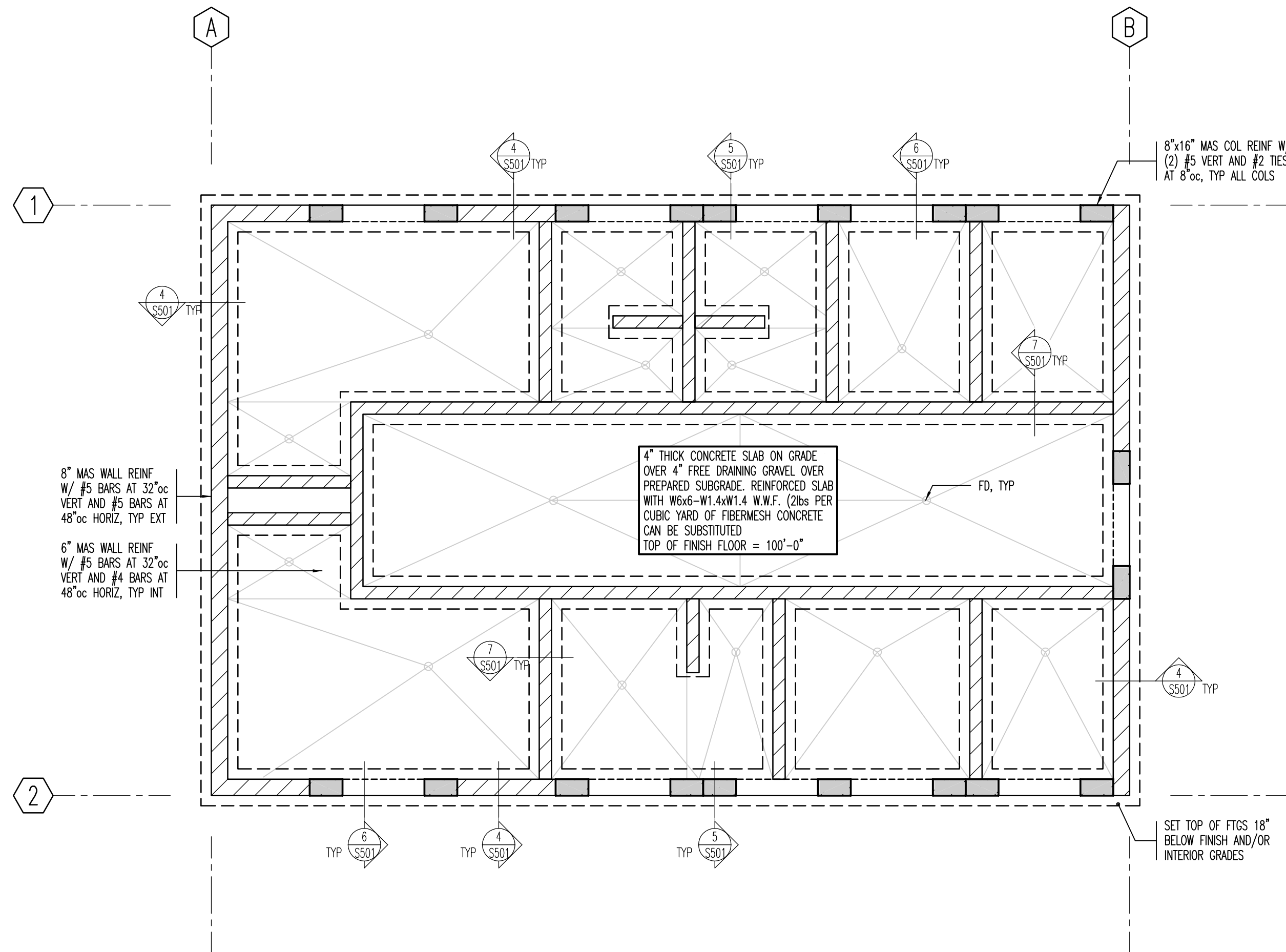
GENERAL  
STRUCTURAL  
NOTES

S102

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- FOOTING AND FOUNDATION PLAN NOTES:**
- COORDINATE LOCATION OF DEPRESSED SLABS, SLOPED SLABS, AND FLOOR DRAINS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
  - SEE ARCHITECTURAL DRAWINGS AND CIVIL DRAWINGS FOR EXTERIOR CONCRETE WORK AT DOORS, SIDEWALKS, ETC.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR BURIED PIPES RUNNING PARALLEL AND PERPENDICULAR TO FOOTINGS.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR TYPICAL CONSTRUCTION AND CONTROL JOINTS IN FLOOR SLABS.
  - FOR LOCATIONS WHERE CONTROL JOINTS ARE DISCONTINUOUS, SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01).
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR REINFORCING AROUND MISCELLANEOUS OPENINGS IN CONCRETE WALLS.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR FILL BENEATH FOOTINGS.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR REINFORCING AROUND MISCELLANEOUS OPENINGS IN MASONRY WALLS.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR MASONRY CONTROL JOINTS.
  - SEE FOOTING AND FOUNDATION DETAILS ON SHEET (SS01) FOR TERMINATION OF HORIZONTAL WALL REINFORCING AT ENDS OF WALLS.

- ROOF FRAMING PLAN NOTES:**
- VERIFY ROOF SLOPES, DRAINS, AND DECK BEARING ELEVATIONS WITH ARCHITECTURAL DRAWINGS. SEE ROOF FRAMING DETAILS ON SHEET (SS01).
  - REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING ELEVATIONS AND SOFFIT ELEVATIONS AND DETAILS.
  - ALL ROOF SHEATHING SHALL HAVE FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS. UNCL. REFER TO SCHEDULE FOR SHEATHING TYPE AND NAULING.
  - TRUSS MANUFACTURER TO SUBMIT SHOP DRAWINGS FOR REVIEW OF ALL FRAMING MEMBERS.
  - REFER TO GENERAL STRUCTURAL NOTES ON SHEET (S101) FOR DESIGN LOADS OF ROOF TRUSSES.
  - ALL TRUSS DETAILS, AND TRUSS TO ORDER TRUSS DETAILS SHALL BE PROVIDED BY THE TRUSS MANUFACTURER.
  - TRUSS MANUFACTURER SHALL VERIFY ALL CEILING ELEVATIONS AND SPECIAL CONDITIONS PRIOR TO FABRICATION.

**MARKS & SYMBOLS LEGEND**

	SECTION MARK SHEET NUMBER
	FTG DESIGNATION TOP EL
	DEPRESSED FND WALL POUR SLAB OVER. SEE FTG AND FND DTLS ON (SS01)
	MAS WALL, SEE PLAN
	MAS BRG WALL BELOW
	MAS COL, SEE PLAN
	ROOF SHEATHING ORIENTATION, 19/32\"/>
	FLR DRAIN, SEE ARCH FOR EXACT LOCATION
	PREFAB TRUSSES, SEE GSN ON (S101) FOR TRUSS LOADING REQUIREMENTS, SEE ARCH DWG FOR SPECIAL CEILING CONFIG, ROOF SLOPES AND OVERHANG CONDITIONS

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**DUNN**  
**DUNN ASSOCIATES, INC.**  
Consulting Structural Engineers

EMAIL: ENG@DUNN-SE.COM  
PH: 801-575-8877 FAX: 801-575-8875

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DEPARTMENT OF NATURAL  
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**YUBA RESTROOM  
DESIGN**

LEVANS, UTAH

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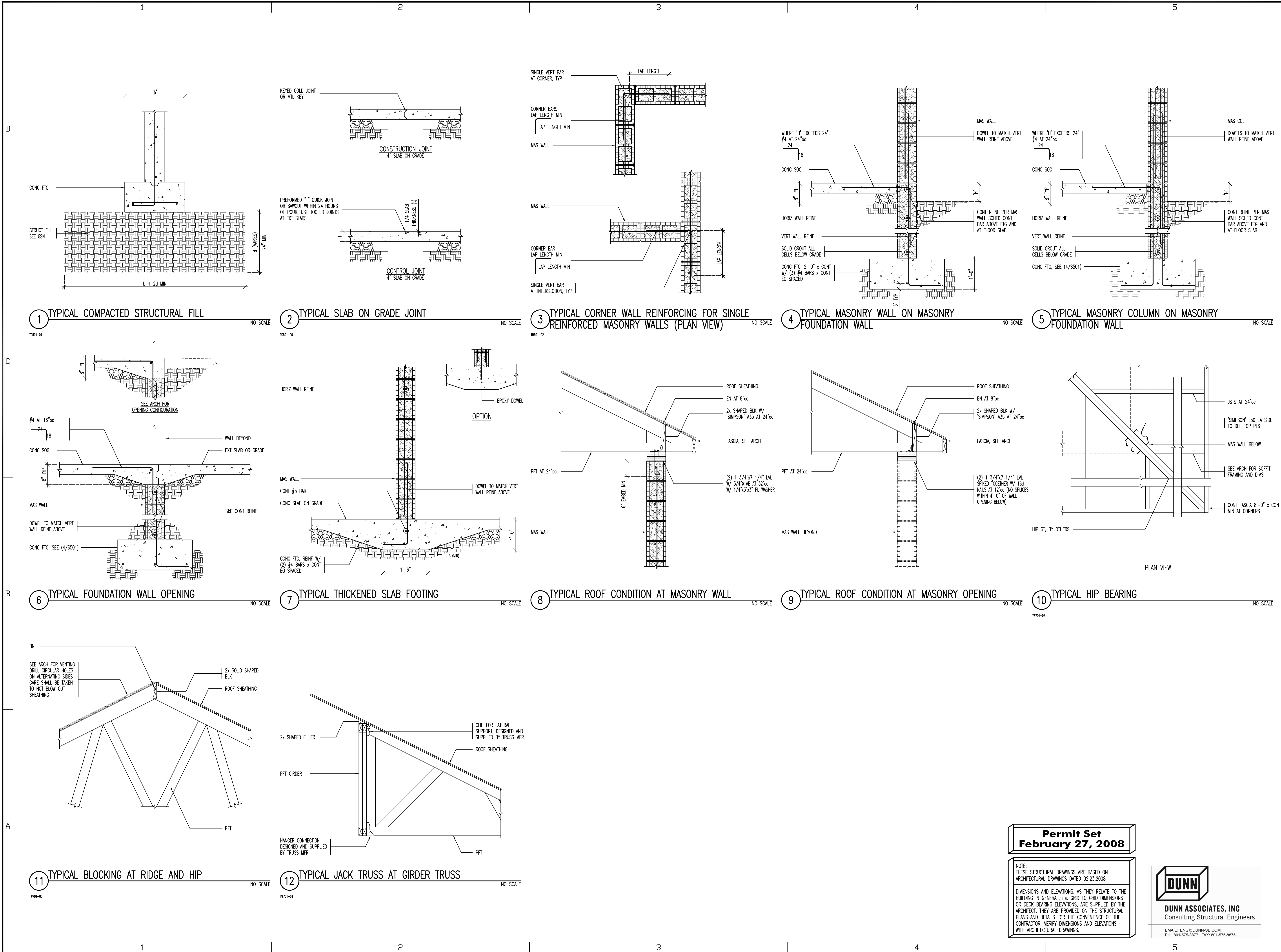
**FOOTING AND  
FOUNDATION/ROOF  
FRAMING PLANS**

**S201**

L.K. SORENSEN ASSOCIATES, INC.  
ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS

1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801)476-0600 FAX (801)262-3511





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DETAILS

S501

**Permit Set**  
**February 27, 2008**

NOTE:  
THESE STRUCTURAL DRAWINGS ARE BASED ON  
ARCHITECTURAL DRAWINGS DATED 02.23.2008

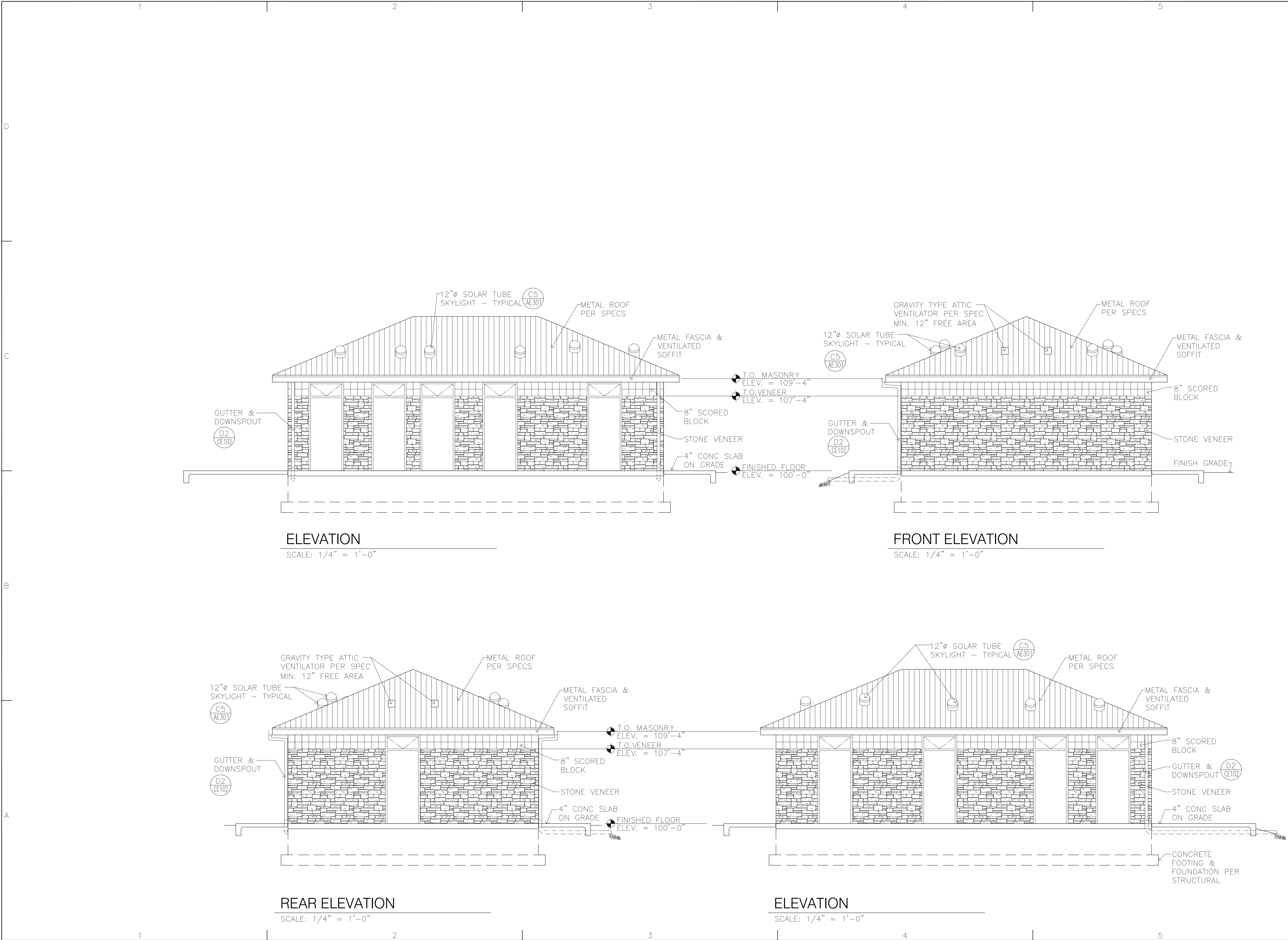
DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE  
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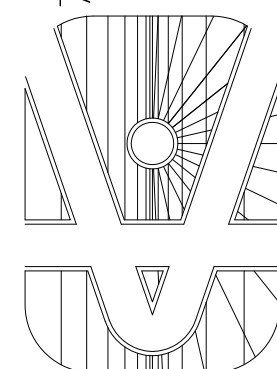
EMAIL: ENG@DUNN-SEE.COM  
PH: 801-575-8877 FAX: 801-575-8875

# AE101





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ARCHITECTS / PLANNERS / LANDSCAPE ARCHITECTS  
1332 DUEHL CIRCLE  
TAYLORSVILLE, UTAH 84123  
(801) 478-0800 Fax (801) 262-3511



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ELECTRICAL:  
SPECTRUM ENGINEERS

DEPARTMENT OF NATURAL  
RESOURCES  
YUBA RESTROOM  
DESIGN  
LEVAN, UTAH



MARK	DATE	DESCRIPTION
	07/05/08	CONSTRUCTION DOCUMENTS

D.F.C.M. PROJECT NO: 07347510  
ARCH. PROJECT NO: 0720  
CAD DWG FILE:  
DRAWN BY: ajs  
CHECKED BY: lks  
DESIGNED BY: lks  
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SHEET TITLE

BUILDING  
ELEVATIONS

AE201





C



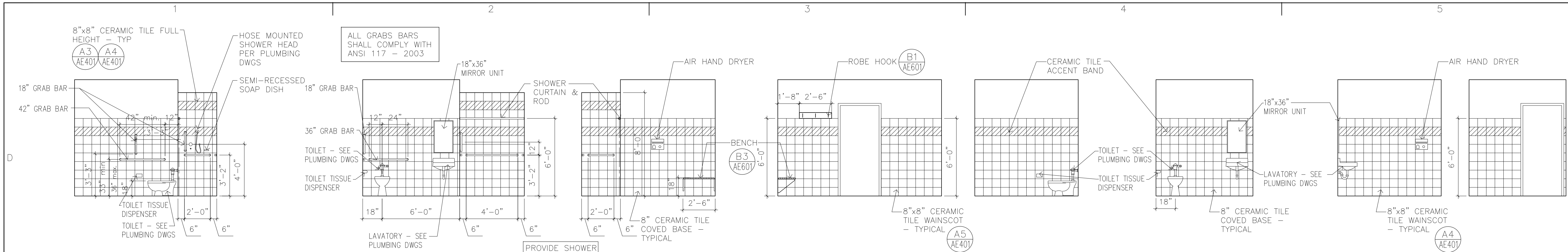
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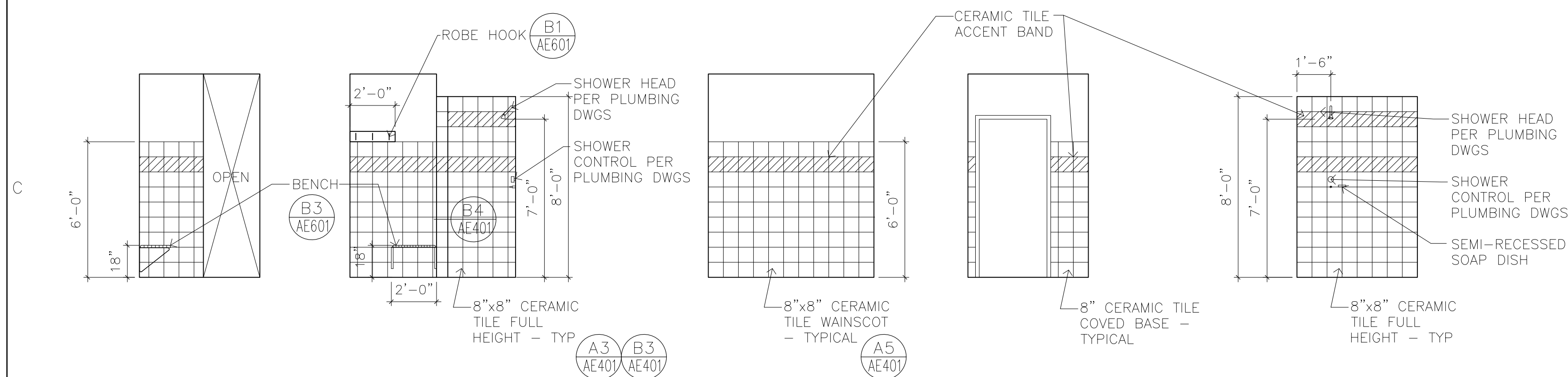
AE301





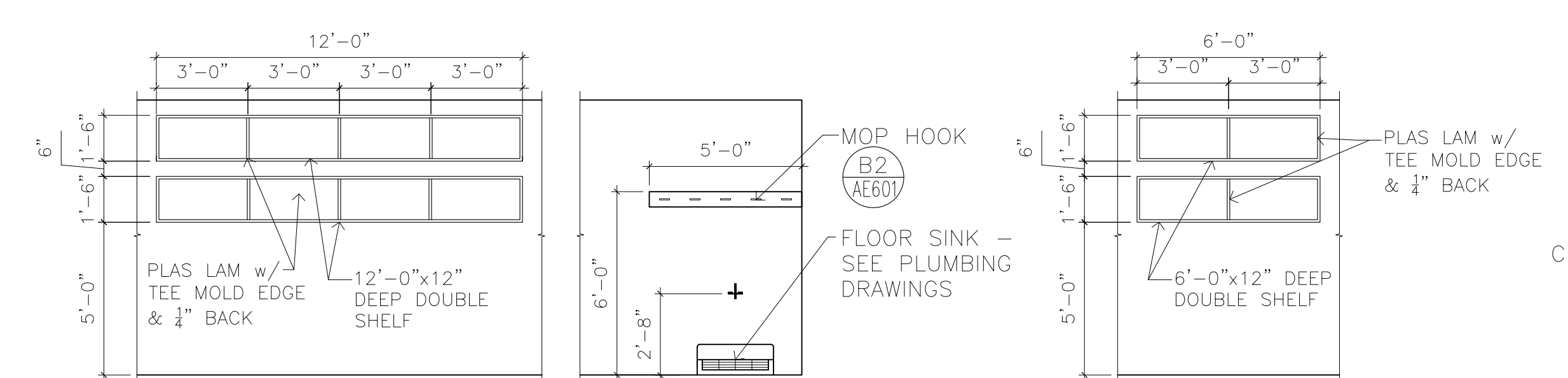
**A** ADA TOILET / SHOWER 101 ( 111 OPP)  
SCALE: 1/4"=1'-0"

**B** TOILET 107 (104 & 105 OPP)  
SCALE: 1/4"=1'-0"

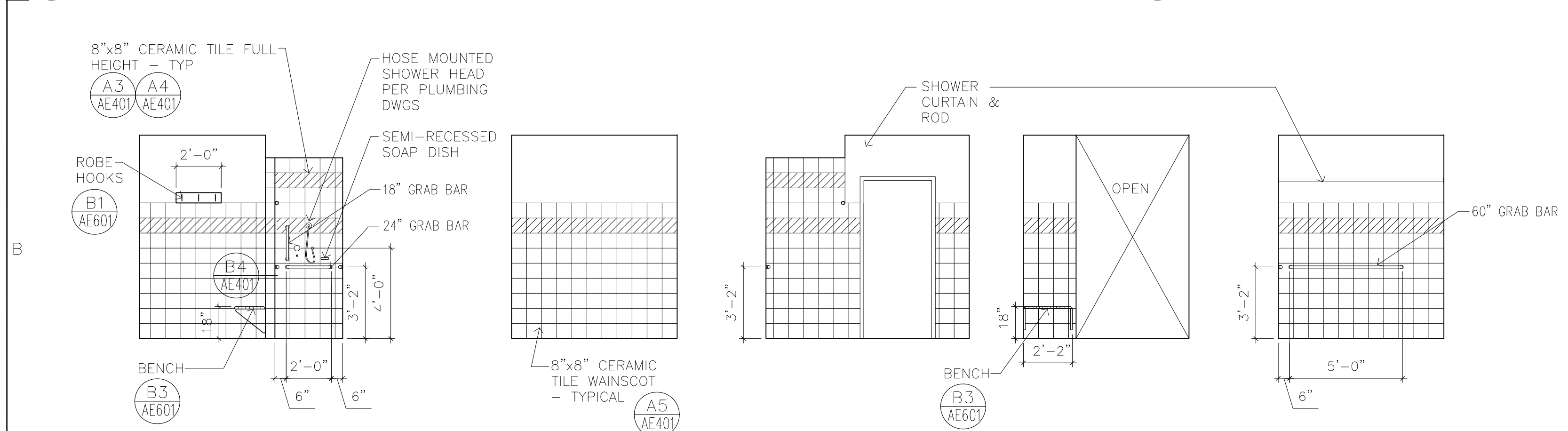


**C** SHOWER 102 & 109 (103 & 110 OPP)  
SCALE: 1/4"=1'-0"

**D** SHOWER 102 & 109 (103 & 110 OPP)  
SCALE: 1/4"=1'-0"



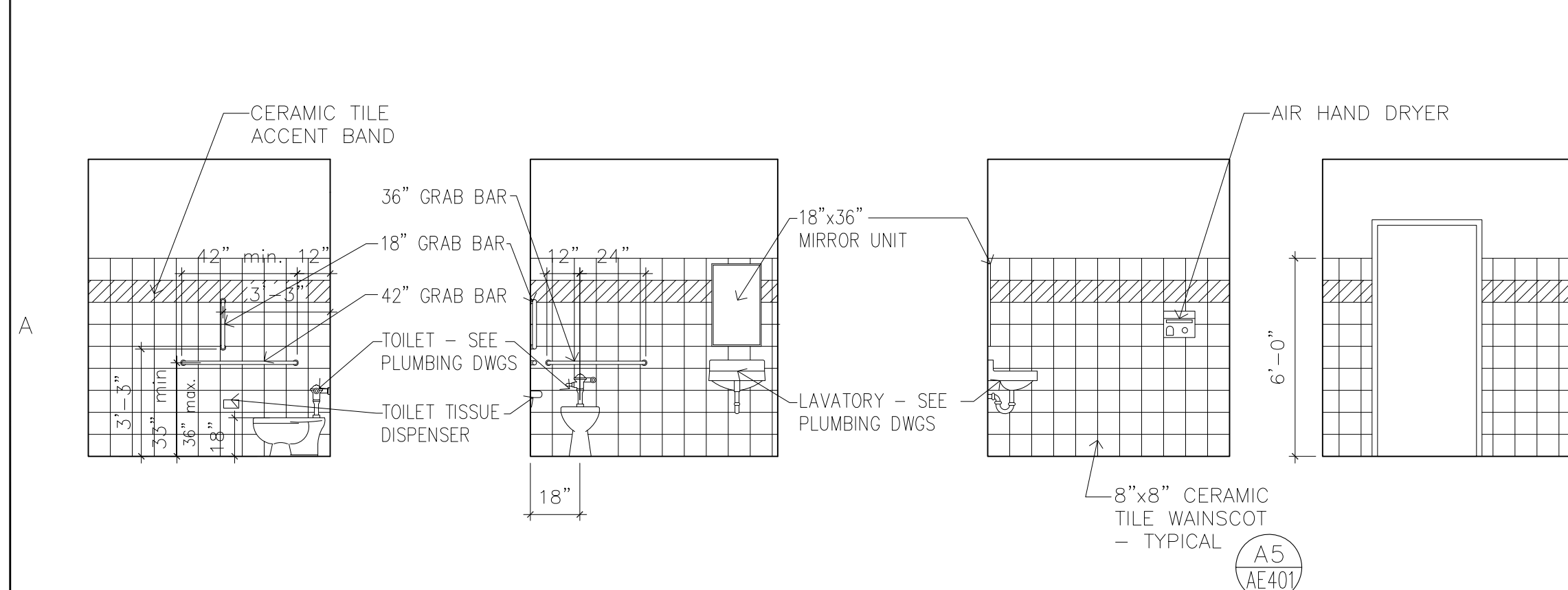
**E** MECHANICAL CHASE 106  
SCALE: 1/4"=1'-0"



**F** DRESSING 110  
SCALE: 1/4"=1'-0"

**G** SHOWER 109  
SCALE: 1/4"=1'-0"

**B4** CERAMIC TILE DETAIL  
SCALE: 1-1/2"=1'-0"



**H** TOILET 108  
SCALE: 1/4"=1'-0"

**A3** CERAMIC TILE DETAIL  
SCALE: 1-1/2"=1'-0"

**A4** CERAMIC TILE - FLOOR  
SCALE: 3"=1'-0"

**A5** CERAMIC TILE WAINSCOT  
SCALE: 1-1/2"=1'-0"

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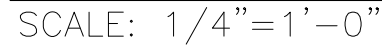
**SHEET TITLE**  
**INTERIOR  
ELEVATIONS /  
DETAILS**

**AE401**



[illegible]

DN1	PROVIDE PAINTED GRAPHIC ON EXTERIOR SIDE OF TOILET ROOM DOORS PER DOOR SIGNAGE SCHEDULE & SPECIFICATIONS. PROVIDE ADA COMPLIANT SIGN PER SPECIFICATION.
-----	---

[illegible]

ACST	ACOUSTIC TILE	MTL	METAL
ALUM	ALUMINUM	N	NONE
CONC	CONCRETE	NLWD	PLYWOOD
CMU	CONCRETE	RB	RUBBER
CPT	CARPET	RPEM	RUBBER PARQUET ENTRANCE MAT
CT	CERAMIC TILE	SCWD	SOLID CORE WOOD DOOR
EXIST	EXISTING	STRUCT	METAL FRAMING & DECK
GLS	GLASS	VCT	VINYL COMPOSITION TILE
GWB	GYPSTUM WALL BOARD	WD	WOOD
MR	MEMBRANE FLOORING		

- A. NO FINISH AFTER INSTALLATION -- CLEAN ONLY.
- B. PAINT IN ACCORDANCE WITH THE SPECIFICATIONS.
- C. STAIN IN ACCORDANCE WITH THE SPECIFICATIONS.
- D. EPOXY PAINT IN ACCORDANCE WITH THE SPECIFICATIONS.
- E. FINISH IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- F. LIQUID HARDENER/SEALER IN ACCORDANCE WITH THE SPECIFICATIONS.

FN1 PROVIDE FRP TRIM PER DETAIL D2/AE301 @ MASONRY WALL  
FN2 PROVIDE PAINTED GRAPHIC ON EXTERIOR SIDE OF TOILET ROOM DOORS PER DOOR SIGNAGE SCHEDULE AND SPECIFICATIONS  
FN3 PROVIDE TRIM PER DETAIL C4/AE301 @ MASONRY WALL  
FN4 PROVIDE 6'-0" HIGH CERAMIC TILE WAINSCOT PER DETAILS AND SPECIFICATIONS  
FN5 PROVIDE FULL HEIGHT CERAMIC TILE PER DETAILS AND SPECIFICATIONS IN ALL SHOWERS  
FN6 RECESS CONCRETE FLOOR SLAB FOR CERAMIC TILE FLOOR FINISH



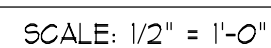
AE601



## D

- C

## B

A

## D

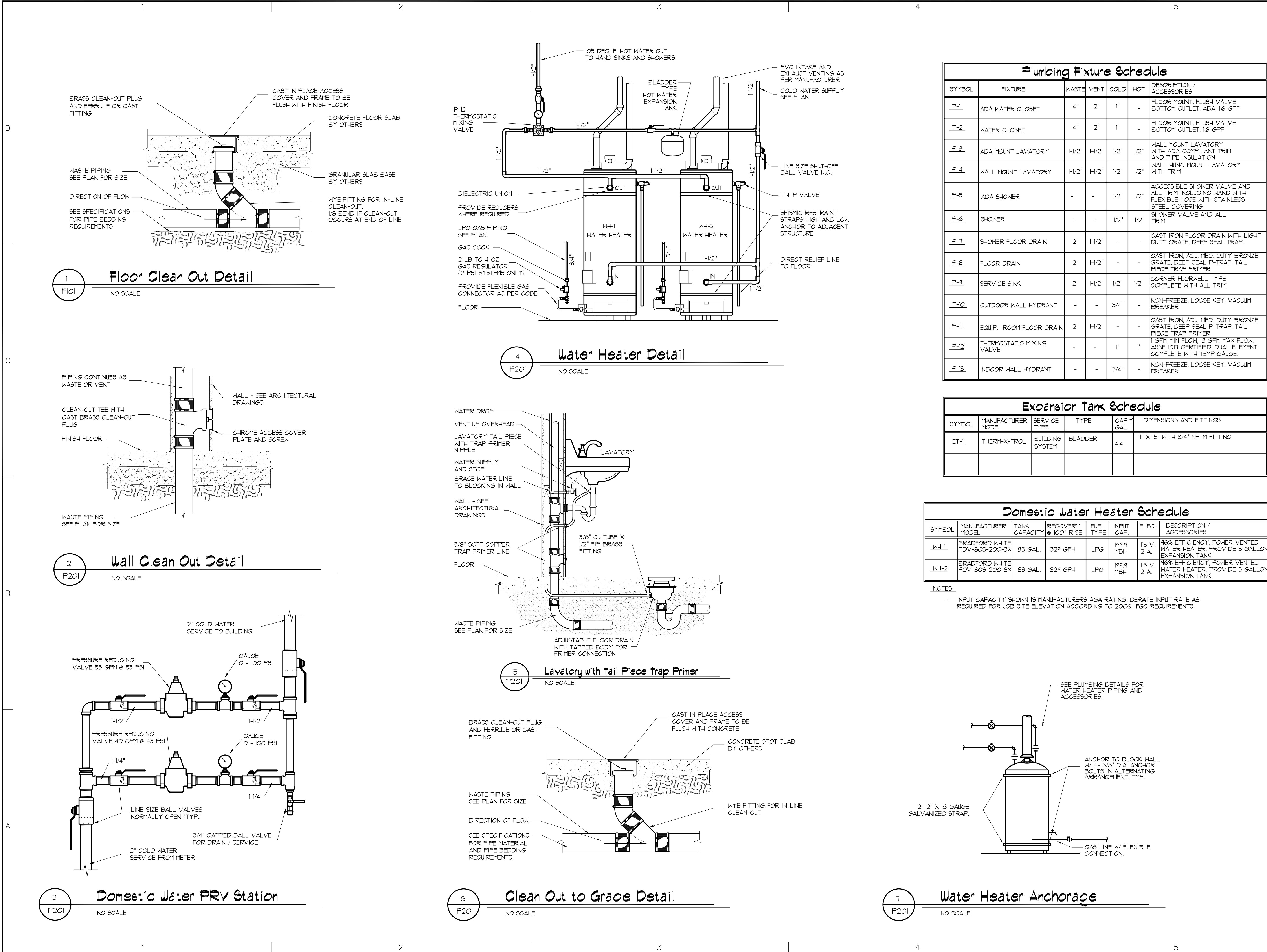
- C

B

A

1101





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TAYLORSVILLE, UTAH 84123  
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STATE OF UTAH  
REGISTERED PROFESSIONAL ENGINEER  
CHARLES LUSH  
No. 155425

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03.10.08	REVISION SET	CONST. SET

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SHEET TITLE  
PLUMBING FLOOR PLAN  
P201



General Mechanical Notes

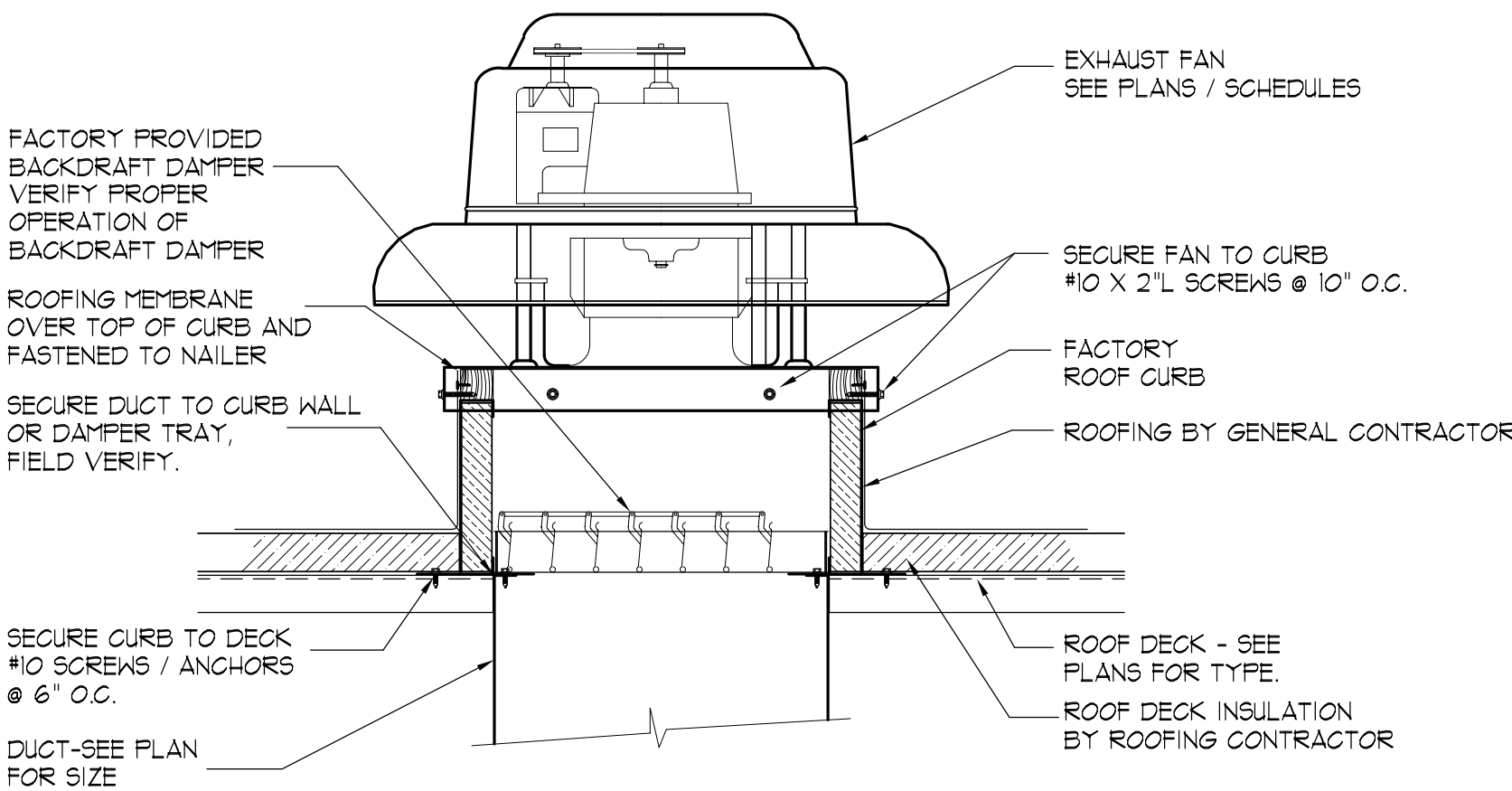
- 1 - MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES.
- 2 - INSTALLATION SHALL BE IN CONFORMANCE WITH THE IBC, 2006 EDITION; IMC 2006 EDITION; IFGC 2006 EDITION AND THE NEC 2005 EDITION; ALL AS ADOPTED AND AMENDED BY THE STATE OF UTAH AND THE LOCAL JURISDICTION.
- 3 - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP AND REMOVAL OF MECHANICAL DEBRIS.
- 4 - ARRANGE AND SCHEDULE INSPECTIONS IN A TIMELY MANNER WITH THE CONSTRUCTION SCHEDULE.
- 5 - UNLESS NOTED OTHERWISE, ALL DUCTWORK SHALL BE CONSTRUCTED OF 26 GA. (MIN) GALVANIZED STEEL AND SHALL CONFORM WITH THE SMACNA AND ASHRAE STANDARDS FOR THE PRESSURE CLASS OF DUCT BEING INSTALLED.
- 6 - ALL EXHAUST AIR DUCTWORK INSTALLED IN THE BUILDING SHALL BE INSULATED WITH 1" THICK (MIN) FOIL FACED DUCT WRAP. DUE TO THE POTENTIAL FOR RODENT AND/OR BIRD PEST INFESTATION, NO DUCT LINER TYPE INSULATION SHALL BE ALLOWED.
- 7 - MECHANICAL EQUIPMENT, MECHANICAL PIPING AND DUCTING SHALL BE SEISMICALLY BRACED WHERE REQUIRED IN CONFORMANCE WITH THE IBC, 2006 EDITION.
- 8 - ALL MECHANICAL EQUIPMENT SHALL BE UL LISTED.
- 9 - ALL REFRIGERATION EQUIPMENT SHALL BE ARI LISTED.
- 10 - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF CEILING REGISTERS, GRILLES AND DIFFUSERS.
- 11 - UNLESS NOTED OTHERWISE, ALL DUCT SIZES SHOWN ARE INSIDE DIMENSIONS. NO INCREASE OF DUCT SIZES FOR LINER TYPE INSULATION IS ANTICIPATED.
- 12 - ALL CONCRETE WORK, ROOFING WORK, FRAMING, AND INTERIOR FINISH WORK IS TO BE PERFORMED BY OTHERS UNDER THE DIRECTION OF THE PROJECT ARCHITECT AND THE SUPERVISION OF THE GENERAL CONTRACTOR.
- 13 - DUE TO THE POTENTIAL FOR RODENT AND/OR BIRD PEST INFESTATION, NO PLASTIC LINED OR FABRIC LINED INSULATED FLEXIBLE DUCTING SHALL BE ALLOWED. WRAP-INSULATED RIGID METAL DUCTING SHALL BE USED FOR THE FINAL CONNECTION OF RUN-OUTS TO GRILLES.

Mechanical Symbols and Abbreviations

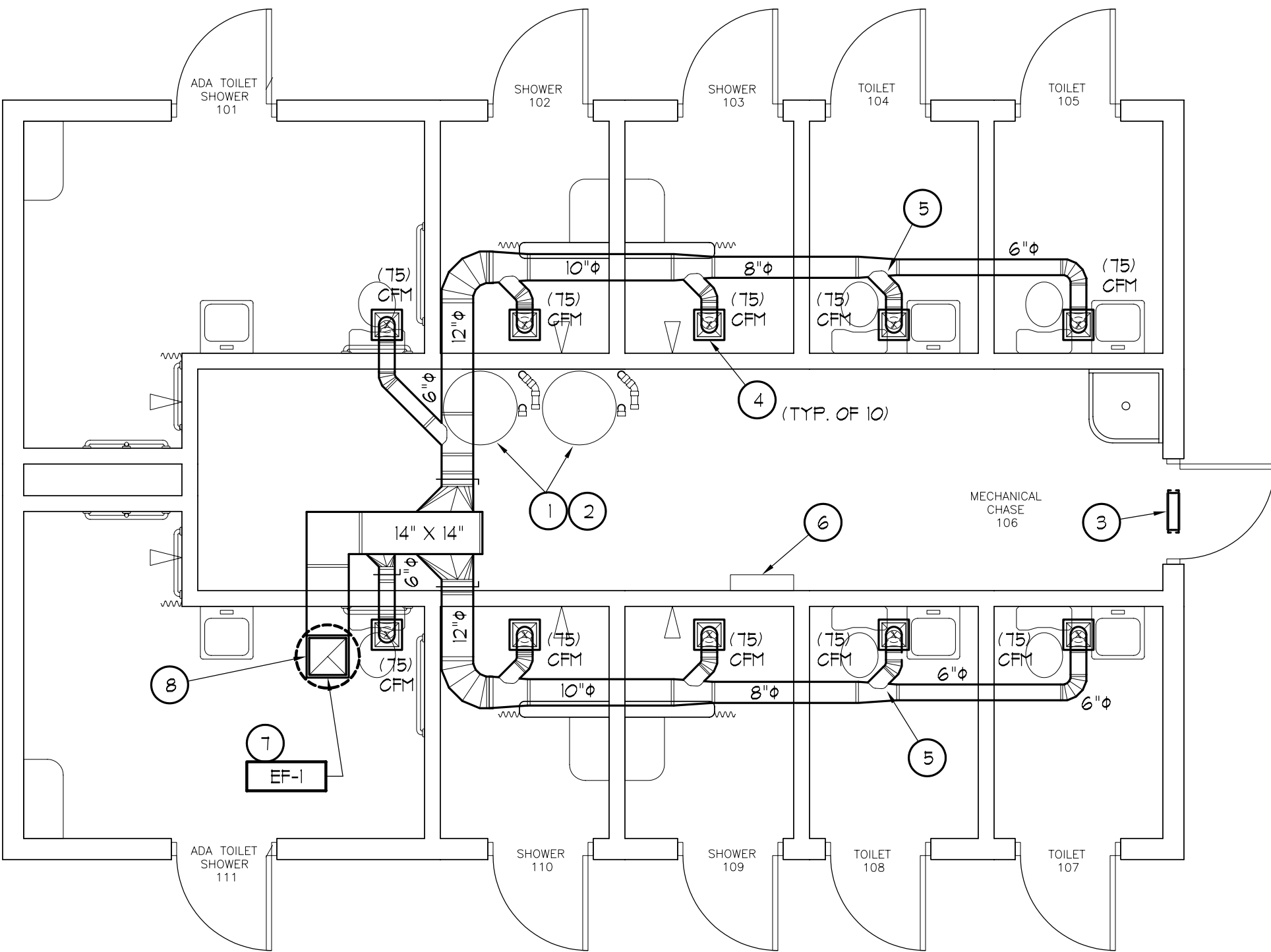
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- RETURN AIR GRILLE
- RA GRILLES WITH SOUND BOOT
- EXHAUST AIR GRILLE
- ROUND BRANCH DUCT
- FLEXIBLE ROUND BRANCH DUCT
- DUCT W/ 1" DUCT LINER
- SUPPLY AIR DUCT TURNED UP
- SUPPLY AIR DUCT TURNED DOWN
- RETURN AIR DUCT TURNED UP
- RETURN AIR DUCT TURNED DOWN
- EXH. AIR DUCT TURNED UP
- EXH. AIR DUCT TURNED DOWN
- THERMOSTAT
- ELEVATION MARK
- POINT OF CONNECTION NEW TO EXISTING
- A.F.F. = ABOVE FINISH FLOOR
- ARCH. = ARCHITECT
- C.O. = CONDENSING UNIT
- DN = DOWN
- E.A. = EXHAUST AIR
- EF = EXHAUST FAN
- FD = FIRE DAMPER
- F/S = FIRE / SMOKE DAMPER
- FURN. = FURNACE
- G.C. = GENERAL CONTRACTOR
- G.I. = GALVANIZED IRON / STEEL
- HWR = HEATING WATER RETURN
- HWS = HEATING WATER SUPPLY
- MAU = MAKE-UP AIR UNIT
- O.A. = OUTSIDE AIR
- O.C. = ON CENTER
- RA = RETURN AIR
- SA = SUPPLY AIR
- UH = UNIT HEATER

Exhaust Fan Schedule										
SYMBOL	BASIS OF DESIGN *	TYPE	CFM	SP	FAN RPM	SONES	HP.	RPM	VOLT./PH.	WEIGHT
EF-1	GREENHECK CO. CUBE 101-4	ROOF MOUNT	150	5"	1380	1.9	1/4	1750	115v./1	58#

\* APPROVED MANUFACTURERS: PENN CO.; L.COOK CO.; GREENHECK CO.



Exhaust Fan Detail  
NO SCALE



Mechanical Floor Plan

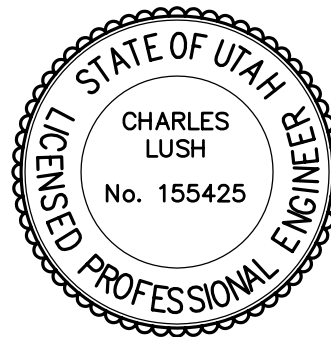
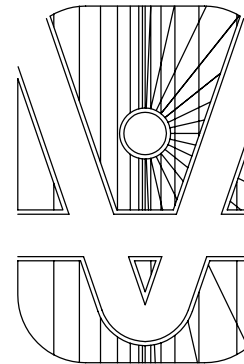
SCALE: 1/2" = 1'-0"



Keyed Reference Notes

- 1 PVC TYPE FLUE VENTING FOR WATER HEATER PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR.
- 2 DOMESTIC HOT WATER HEATER. SEE PLUMBING PLANS.
- 3 PROVIDE AND INSTALL 14" X 10" CHEVRON BLADE TYPE TRANSFER AIR GRILLE WITH INSECT SCREEN IN DOOR AT APPROX. 8" A.F.F.
- 4 PROVIDE EXHAUST AIR GRILLE IN FRP TYPE CEILING, EGG CRATE STYLE, 9" X 9" NECK, ALUMINUM CONSTRUCTION, STANDARD WHITE FINISH. PROVIDE DUCT CONNECTION ADAPTER. SEE REFLECTED CEILING PLAN FOR EXACT LOCATION.
- 5 PROVIDE AND INSTALL HIGH EFFICIENCY TYPE BRANCH DUCT CONNECTION WITH MANUAL BALANCING DAMPER. TYPICAL ALL BRANCH DUCT CONNECTIONS.
- 6 ELECTRICAL SERVICE PANEL LOCATION TO REMAIN UN OBSTRUCTED. SEE ELECTRICAL PLANS.
- 7 PROVIDE AND INSTALL CURB MOUNTED EXHAUST FAN ON ROOF ABOVE. SEE EQUIPMENT SCHEDULES FOR ADDITIONAL INFORMATION.
- 8 EXTEND 14" X 14" EXHAUST AIR DUCTING UP TO CURB MOUNTED EXHAUST FAN ON ROOF ABOVE. COORDINATE WITH STRUCTURE.

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1332 DUEHL CIRCLE  
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	3.10.08	CONST. SET		

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SHEET TITLE

MECHANICAL  
FLOOR PLAN

M101



File Name: P:\2008\20080015\Drawings\Sheet\15EE001.dwg Last Plotted: 2008/05/30 @ 5:26 PM By: sts

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	ROOM OR SPACE NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
WIRING METHODS	
	WIRING.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	SWITCH, SINGLE POLE ("X" INDICATES FIXTURES CONTROLLED).
ELECTRICAL POWER AND DISTRIBUTION	
	METER.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	LIGHTING RELAY, CONTACTOR PANEL, OR DIMMING ENCLOSURE.
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	STORED ENERGY METER CONTROLLED CIRCUIT BREAKER.
	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
	PHOTOCCELL.

ABBREVIATIONS			
NOTE: ALL ABBREVIATIONS MAY NOT BE USED.			
1P	SINGLE POLE	KV	KILOVOLT
1PH	SINGLE-PHASE	KVA	KILOVOLT AMPERE
1WAY	ONE-WAY	KVAR	KILOVOLT AMPERE REACTIVE
2/C	TWO-CONDUCTOR	KW	KILOWATT
2WAY	TWO-WAY	KWh	KILOWATT HOUR
3/C	THREE-CONDUCTOR	LED	LIGHT EMITTING DIODE
3PH	THREE-PHASE	LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
3WAY	THREE-WAY	LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
4OUT	QUADRUPL RECEPTACLE OUTLET	LPS	LOW VOLTAGE
4PDT	FOUR-POLE DOUBLE THROW	LRA	LOCKED ROTOR AMPS
4PST	FOUR-POLE SINGLE THROW	LTG	LIGHTING
4W	FOUR-WIRE	LV	LOW VOLTAGE
4WAY	FOUR-WAY	MATV	MASTER ANTENNA TELEVISION SYSTEM
A	ABOVE COUNTER	MAX	MAXIMUM
AC	ARMORED CABLE	MC	METAL CLAD
ADA	AMERICANS WITH DISABILITIES ACT	MCA	MINIMUM CIRCUIT AMPS
ADJ	ADJACENT	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
AFG	ABOVE FINISHED GRADE	MCP	MOTOR CIRCUIT PROTECTION
AIC	AMPERE INTERRUPTING CAPACITY	MDP	MAIN DISTRIBUTION PANEL
ALUM	ALUMINUM	MG	MOTOR GENERATOR
AMP	AMPERE	MH	MANHOLE
ANN	ANNUNCIATOR	MIN	MINIMUM
AP	ACCESS POINT (WIRELESS DATA)	MLO	MAIN LUGS ONLY
AR	AS REQUIRED	MOCP	MAXIMUM OVERCURRENT PROTECTION
ASC	AMPS SHORT CIRCUIT	NA	NOT APPLICABLE
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED
AV	AUDIO VISUAL	NEC	NATIONAL ELECTRICAL CODE
AWG	AMERICAN WIRE GAGE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BB XFMR	BUCK-BOOST TRANSFORMER	NFC	NATIONAL FIRE CODE
C	CEILING MOUNTED COMMUNITY ANTENNA TELEVISION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CATV	COMMUNITY ANTENNA TELEVISION	NIC	NOT IN CONTRACT
CB	CIRCUIT BREAKER	NL	NIGHT LIGHT
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT	NO	NORMALLY OPEN
CCTV	CLOSED CIRCUIT TELEVISION	NTS	NOT TO SCALE
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT	OC	ON CENTER
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED	OCIP	OVER CURRENT PROTECTION
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED	OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/OWNER INSTALLED	OF/OI	OWNER FURNISHED/OWNER INSTALLED
CKT	CIRCUIT	OFF	OVERHEAD (COILING)
CM	CONSTRUCTION MANAGER	OH DR	DOOR
CND	CONDUIT	OL	OVERLOAD
CO	CONVENIENCE OUTLET	PB	PUSHBUTTON
COR	CONTRACTING OFFICER'S REPRESENTATIVE	PF	POWER FACTOR
CP	CONTROL PANEL	PH	PANEL
CT	CURRENT TRANSFORMER	PNL	PANEL
CTV	CABLE TELEVISION	PT	POTENTIAL TRANSFORMER
CU	COPPER	PAN/TILT/ZOOM	PAN/TILT/ZOOM
dba	UNIT OF SOUND LEVEL	QTY	QUANTITY
DPDT	DOUBLE POLE DOUBLE THROW	R	REMOVE
DS	DISCONNECT SWITCH	RCP	REFLECTED CEILING PLAN
EA	EACH	RMC	RIGID METAL CONDUIT
EM	EMERGENCY	RNC	RIGID NONMETALLIC CONDUIT
EMT	ELECTRICAL METALLIC TUBING	RPM	REVOLUTIONS PER MINUTE
ENT	ELECTRICAL NONMETALLIC TUBING	RR	REMOVE AND RELOCATE
EPO	EMERGENCY POWER OFF EQUIPMENT	SCA	SHORT CIRCUIT AMPS
EQUIP	EQUIPMENT	SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
EX	EXISTING	SF	SQUARE FOOT (FEET)
F	FURNITURE MOUNTED	SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
FA	FIRE ALARM	SPDT	SINGLE POLE, DOUBLE THROW
FCP	FIRE ALARM CONTROL PANEL	SPEC	SPECIFICATION
FLA	FULL LOAD AMPS	SPST	SINGLE POLE, SINGLE THROW
FMC	FLEXIBLE METALCONDUIT	S/S	START/STOP
FOB	FREIGHT ON BOARD	ST	SINGLE THROW
FVNR	FULL VOLTAGE NON-REVERSING	SWBD	SWITCHBOARD
G	GROUND	SWGR	SWITCHGEAR
GEN	GENERATOR	TL	TWIST LOCK
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TP	TELEPHONE POLE
GFP	GROUND FAULT PROTECTION	TP	TWISTED PAIR
HD	HEAVY DUTY	TTB	TELEPHONE TERMINAL BOARD
HID	HIGH INTENSITY DISCHARGE	TV	TELEVISION
HOA	HAND-OFF-AUTOMATIC	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HP	HORSE POWER	TYP	TYPICAL
HPF	HIGH POWER FACTOR	UF	UNDERFLOOR
HPS	HIGH PRESSURE SODIUM	UGND	UNDERGROUND
HV	HIGH VOLTAGE	UPS	UNINTERRUPTIBLE POWER SUPPLY
HZ	HERTZ	V	VOLTS
IG	ISOLATED GROUND	VA	VOLT AMPERE
IMC	INTERMEDIATE METAL CONDUIT	VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
IN/S	INSULATED/ISOLATED	W	WITH
I/O	INPUT/OUTPUT	W/O	WITHOUT
IR	INFRARED	WP	WEATHERPROOF
J-BOX	JUNCTION BOX	XFMR	TRANSFORMER

DEFINITIONS	
NOTE: ALL DEFINITIONS MAY NOT BE USED.	
INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.	
DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.	
APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.	
FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."	
INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."	
PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."	
INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.	
TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...	

## GENERAL ELECTRICAL NOTES

- CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
- OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
  - THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
  - THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
  - THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
- EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
- SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
- REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.



